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Draft Environmental Impact Report

Bayview Hunters Point Redevelopment Projects and Zoning

San Francisco Redevelopment Agency
San Francisco Planning Department

Planning Department File No. 1996.546E
State Clearinghouse No. 2003062094

Draft EIR Publication Date: October 19, 2004
Draft EIR Public Hearing Date: December 7, 2004
Draft EIR Public Comment Period: October 19, 2004 to
December 7, 2004

Please send written comments to:

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DATE: October 19, 2004

TO: Distribution List for the Bayview Hunters Point Redevelopment Projects
and Rezoning EIR

FROM: Jose Campos, Planning Supervisor

SUBJECT: Request for the Bayview Hunters Point Redevelopment and Rezoning Project Final EIR
(Case No. 1996.546E)

This is the Draft of the Environmental Impact Report (EIR) for the Bayview Hunters Point Redevelopment and Rezoning Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, we will prepare and publish a document titled "Summary of Comments and Responses" that will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the Redevelopment Agency Commission and City Planning Commission in an advertised public meeting(s) and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one, rather than two, documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them. If you would like a copy of the Final EIR, therefore, please fill out and mail the postcard provided inside the back cover to the San Francisco Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

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S. SUMMARY

A. PROJECT AREA HISTORY

This is the Environmental Impact Report (EIR) for the Bayview Hunters Point Redevelopment and Rezoning Project (the Project). The Project consists of a series of actions and programs to foster public and private investment and development in the Bayview Hunters Point Area (Project Area). It would authorize the San Francisco Redevelopment Agency (the Agency) to use redevelopment tools, such as tax-increment financing, land acquisition, and affordable housing development, to assist in improving conditions in the Project Area.

The Project would encourage a mix of development, retention, and rehabilitation activities in the Project Area that enhance and strengthen existing activities in Bayview Hunters Point and benefit current residents and businesses without displacing or replacing them. The Project would provide opportunities for economic development by retaining and creating new businesses and housing, as well as through new construction and rehabilitation. The Project also promotes community enhancements through the creation of open space and streetscape programs and through design guidelines. Although these goals would generally be consistent with existing applicable *General Plan* goals and policies, adoption of the Project would require that some components of the *General Plan* be amended so that all plans are consistent. It should be noted that the *General Plan* contains a number of elements with objectives, policies, and principles that are relevant to the Project that would not require any changes.

Bayview Hunters Point is one of four areas in the eastern portion of the City identified in the Planning Department's current Eastern Neighborhoods community planning and rezoning process. The Eastern Neighborhoods, which are comprised of Showplace Square/Potrero Hill, The Mission, South of Market, and Bayview Hunters Point and represent roughly one-quarter of the City, are being studied to identify core areas where Production, Distribution, and Repair (PDR) businesses are needed to maintain a diverse economy. PDR is a new land use category that is proposed to replace M-1 and M-2 industrial zoning. If approved, these core

areas will be zoned to promote business and job expansion, while the rest of the Eastern Neighborhoods will allow or expressly encourage housing.

The Eastern Neighborhoods rezoning is part of a larger initiative embodied in the Citywide Action Plan formulated by the Planning Department to provide a comprehensive long-term framework for the allocation of development that will enhance the quality and character of the City's neighborhoods. The Citywide Action Plan directs housing in places with public transit and urban amenities, new office uses in and around downtown, and industrial uses in industrial lands. Within the Eastern Neighborhoods, this effort has focused on balancing the need to expand housing opportunities while protecting PDR activities in industrial lands in the City.

The *Bayview Hunters Point Community Revitalization Concept Plan (Concept Plan)*, which is also discussed in detail in Section II.C, Project Area History and Demographics, provided many of the community goals, objectives, and visioning used as the basis for the Eastern Neighborhoods community planning and rezoning effort. The goals, objectives, projects, and programs included in the Project are the result of extensive community meetings and workshops, and reflect ideas and concerns expressed by community residents and stakeholders, including the Bayview Hunters Point Project Area Committee (PAC).

The Agency and the Bayview Hunters Point PAC, which is a community-elected group made up of local residents, property owners, business owners, and community organizations working collaboratively with the Planning Department in its Eastern Community planning process, determined that "Rezoning Option C: High Housing Option" as described in the *Community Planning in the Eastern Neighborhoods Rezoning Options Workbook (Workbook)*, created the most development potential of the zoning alternatives and was most consistent with the *Concept Plan*. For this reason, this document considers Rezoning Option C as the Project for environmental review purposes. Land use and zoning controls associated with the Project would be considered as amendments to the *San Francisco Planning Code* by the Planning Commission and San Francisco Board of Supervisors at a later date. In addition, "Rezoning Option B: Moderate Housing Option" is evaluated in this EIR as an alternative to the Project. A detailed discussion of the process by which the rezoning options were determined is presented in Section II.C, Project Area History and Demographics, of this document.

B. PROJECT DESCRIPTION

The Agency proposes the Bayview Hunters Point Redevelopment and Rezoning Project, which is located in the southeastern quadrant of the City and County of San Francisco in an area referred to as Bayview Hunters Point. The Project consists of the following elements:

- Adoption of the 1,575-acre Bayview Hunters Point (BVHP) Redevelopment Plan, which contains an amendment to the existing 137-acre Hunters Point (HP) Redevelopment Project Area to include an additional 1,438 acres. Redevelopment activity within the 1,575-acre amended BVHP Redevelopment Plan Area would be divided into seven activity nodes, including Northern Gateway, Town Center, Health Center, Oakinba, South Basin, Hunters Point Shoreline, and Candlestick Point. The land use districts, allowable uses, and development controls for the existing HP Redevelopment Project Area would not change; however, the *San Francisco Planning Code* would be applied to future development proposals in the added area as it exists at the time of a development application.
- Amendments to the existing 126-acre India Basin Industrial Park (IBIP) Redevelopment Plan and the existing 20-acre Bayview Industrial Triangle (BIT) Redevelopment Plan to: (1) revise the land use districts, allowable uses, and development controls of each plan to be consistent with the rezoning work of the San Francisco Planning Department; and (2) allow housing and mixed-use development along the Third Street Light Rail Transit (LRT) corridor. The proposed BIT Redevelopment Plan Amendment would also institute tax increment financing as the means to fund Agency activities and programs in the Redevelopment Project Area.
- Adoption of the BVHP, IBIP, and BIT Redevelopment Plans which anticipates new development resulting in approximately 2.4 million square feet (sf) of net new floor area, including commercial, retail, industrial, and residential land uses, as well as approximately 5,523 net new employees, and an increase of approximately 3,700 net new dwelling units.
- Implementation of three major community redevelopment programs in the BVHP, IBIP, and BIT Redevelopment Plan Areas, which include an Economic Development Program, Affordable Housing Program, and a Community Enhancements Program.
- Rezoning in the Project Area consistent with “Rezoning Option C: High Housing Option” as reflected in the *Community Planning in the Eastern Neighborhoods, Rezoning Options Workbook (Workbook)*.¹
- Development of the Stadium Development Retail/Entertainment Center, consistent with Propositions D and F of the June 1997 San Francisco ballot.
- Development and construction of the Bayview Connections Urban Open Space Project.

The Project is a 30-year program that would authorize the Agency to participate in certain projects and programs seeking to correct or alleviate documented physical and economic blighting conditions in the Project Area. It is proposed as an incremental urban infill and rehabilitation program for private properties and public facilities within the Project Area. As such, development or redevelopment activities that are fostered by implementation of the Project would be built and occupied over time and full build-out could extend beyond 30 years.

The Project is designed to encourage and assist in the development of a more land-use intensive mixed-use district than currently exists. Special emphasis would be placed on increasing residential development in a manner that successfully integrates the PDR businesses that are needed to maintain a diverse economy; expanding existing arts, cultural, and community activities; aiding existing businesses and attracting new commercial development; rehabilitating existing commercial and residential space in historic buildings; expanding medical enterprises; and accommodating the Stadium Development Retail/Entertainment Center. In addition, the Project calls for the development and rehabilitation of affordable housing units and affordable community-service office space, as well as the implementation of community redevelopment programs.

Implementation of the Project would create approximately 2,400,000 net new square feet of floor, including 115,000 square feet of Cultural/Institutional/Educational uses; 50,000 square feet of Medical and Health Services; 220,000 square feet of Management and Information Professional Services; 425,000 square feet of PDR; 1,591,850 square feet of Retail and Entertainment; and 5,000 square feet of Visitor Lodging. In addition, the project would result in about 3,700 dwelling units. These dwelling units would include approximately 1,075 multi-family owner-occupied units (one to three bedrooms; 1,000 multi-family rental units (studio and one bedrooms); 925 single-family rentals (three to four bedrooms); and 700 multi-family rental units (two to four bedrooms). Redevelopment of specific sites could include a mix of uses on any given site consistent with controls in the *Planning Code* and the applicable Redevelopment Plans. This EIR analyzes overall changes in land use in the Project Area, but does not assume detailed plans for specific development sites.

The achievement of the Project's revitalization goals for the Project Area will necessitate a collaborative effort between the Agency and City departments. Redevelopment tools and resources will be used in conjunction with the tools and resources of local, state, and federal agencies to maximize the effective use of public funds.

C. ENVIRONMENTAL EFFECTS

The Project would foster a mix of development and rehabilitation activities in the Project Area, emphasizing residential, PDR, medical and community-serving uses, as well as office, retail, stadium, hotel, and parking uses. Build-out of these uses would reflect the new land use controls, as well as overall growth projections for the City of San Francisco. As shown in Chapter III, Environmental Setting and Impacts, and summarized below, implementation of the Project would create limited significant physical environmental effects, but would include three significant and unavoidable impacts including:

- 1) **Urban Design and Visual Quality (Views).** The Stadium Development Retail/Entertainment Center would have a visual impact on short-range views. The new stadium would obstruct scenic views of the bay looking southeast along Gilman Street. The new mall would block some shoreline and bay views from residences at the St. Francis Bay Condominiums on the southern side of Bayview Hill. The new mall would also change the visual character of the Candlestick Point State Recreation Area, as a portion of the park would be used for parking. These are considered significant, unavoidable visual impacts to scenic views of the Bay.
- 2) **Urban Design and Visual Quality (Lighting).** The impact of lighting from the Stadium Development Retail/Entertainment Center would depend on the combination of effects from stadium light towers, scoreboards, parking lot lights, circulation traffic, the frequency of night games at the stadium, and architectural/perimeter lighting from the entire complex. While the existing stadium lighting would be replaced in kind with lighting for the new stadium, the new mall would be an ongoing, new source of light. The new mall would be open during some portion of the evening, and lights from the new mall, the parking lot, and vehicles would represent an unavoidable increase in

overall lighting levels. The new mall lights would be seen from numerous vantage points and nearby residential areas. This substantial new source of light could adversely affect adjacent properties, which is considered a significant and unavoidable impact.

- 3) **Transportation (Intersection Operation).** The intersection of Third Street/Cesar Chavez Street would be considered a significant unavoidable impact since no mitigation is available to reduce this impact to less than significant.

As stated previously, the proposed land use controls would be generally consistent with existing applicable *General Plan* goals and policies; however, adoption of the Project would require that some components of the *General Plan* be amended so that all plans are consistent. The *General Plan* contains a number of elements with objectives, policies, and principles that are relevant to the Project and would not require any changes. Further, the Project would be consistent with the *San Francisco Planning Code*, once the Code has been amended to include the proposed zoning changes, as well as the HP, BIT, and IBIP Redevelopment Plans, once amended and adopted. (The Hunters Point Redevelopment Plan will be renamed the Bayview Hunters Point Redevelopment Plan.)

LAND USE

Implementation of the Project would transform Bayview Hunters Point into a moderate scale, transit-oriented, mixed-use residential and commercial district focused along the Third Street corridor. On Third Street, new land uses would include ground-level retail with higher-density residential and, where appropriate, commercial and light PDR above. Transit-supportive pedestrian and streetscape improvements, focused in the Town Center, would be implemented on Third Street to stimulate economic revitalization of the Third Street commercial core. Much of the existing industrial areas not adjacent to Third Street would remain unchanged except in the eastern section of the Project Area where a new mixed-use residential community with shoreline open space would be created. In addition, buffer zones would be established throughout the Project Area to provide a transition between industrial and mixed uses and residential uses.

New cultural, educational and institutional uses would be encouraged in the vicinity of the Bayview Opera House, and new medical and health services related to the existing health and senior services would also be developed. Various types of retail activity would be distributed throughout the Project Area.

The Project would result in substantial changes in land use character. However these changes are necessary to achieve redevelopment goals related to the elimination of economic and physical blight within the Project Area. The Project would generally create a more compatible land use pattern in the Project Area by implementing new zoning controls that would locate and concentrate new development in appropriate locations, and establish buffer zones between existing and new residential uses and industrial and mixed-use development. None of the proposed rezoning changes would physically divide an established community or adversely change the character of an established community. In fact, implementation of the Project would: (1) upgrade the overall economic and physical conditions of Project Area; (2) safeguard the preservation and retention of existing residential uses; and (3) create economic development opportunities for existing residents.

While the proposed rezoning within the Project Area would create new zoning districts, the existing land use classifications and height limits would largely be retained.

POPULATION, EMPLOYMENT, AND HOUSING

The Project is a “high housing option” plan that would revise land use controls to allow more intensive development of medical, retail, and commercial uses, as well as additional housing. Through these changes in land use controls and designations, the Project could reduce the potential amount of employment associated with PDR activities and increase the potential amount of employment in medical, retail, and commercial activities. Development of approximately 2.4 million square feet as envisioned by the Project would accommodate an estimated 5,523 new jobs, which is intended, in part, to provide employment opportunities for residents of the area.

The projected need for affordable housing may exceed that provided by the Project in the Project Area; however, there are no standards of significance for the provision of affordable

housing, and, therefore, this is not considered to be a significant adverse impact. Nevertheless, the Project includes an Affordable Housing Program to address the need for affordable housing in the Project Area and to assist current homeowners in maintaining and retaining their homes. Further, the number of non-affordable housing units provided in the Project Area would exceed the demand for these units.

The transportation model for the Project anticipates population growth of 20,896 residents in the Project Area in 2025. This increase would be significantly larger than the increase of 2,815 residents anticipated without the project in the Year 2025 and would account for nearly one-quarter (24 percent) of the citywide population growth (80,100 residents) anticipated in San Francisco during this same 25-year period.

VISUAL QUALITY

View Corridors and Visual Quality

Bayview Hunters Point consists of visually heterogeneous neighborhoods located in the southeastern quadrant of San Francisco, surrounded by the Visitacion Valley to the south, Bernal Heights to the west, and Hunters Point Shipyard and the San Francisco Bay to the east. The area has distinct visual boundaries and surroundings, such as Cesar Chavez Street to the north and the US 101 freeway to the west. The most prominent visual landmarks in the Project Area are San Francisco Bay to the east and the hills, including Hunters Point Hill and Silver Terrace Hill in the approximate center of the Project Area, and Bayview Hill to the south. Within these boundaries are single-family houses, apartment buildings, parklands, undeveloped properties, and a wide variety of retail and commercial buildings, as well as industrial warehouses and structures. Third Street, a major commercial corridor, is in the natural valley created by Hunters Point Hill and Silver Terrace Hill.

The overall visual impression of the Project Area would change subtly as street trees and greenery are added, infill development is completed on various sites, the Hunters Point Power Plant is eventually replaced with less visually dominant mixed-use development, and certain Port and State lands along the shoreline are converted to public park uses.

New development would generally be consistent with existing development with regard to height and scale, and major scenic views or view corridors would not be obstructed. Renovation and rehabilitation of existing structures, particularly along Third Street, would contribute to enhanced visual quality. The Project would also aid in separating industrial uses from mixed use and residential uses, thereby providing increased visual coherence. In fact, one of the intended goals of the Project is to improve the visual character of the Project Area by eliminating physical blight.

However, development of the Stadium Development Retail/Entertainment Center would result in visual impacts on short-range views due to the allowed mass and height of the proposed structure. The new stadium would obstruct scenic views of the bay looking southeast along Gilman Street. The new mall would block some shoreline and bay views from residences at the St. Francis Bay Condominiums on the southern side of Bayview Hill. The new mall would also change the visual character of the Candlestick Point State Recreation Area, as a portion of the park would be used for parking. These are considered significant, unavoidable visual impacts to scenic views of the Bay. However, the removal of the existing stadium may improve southern views of the bay from those areas directly north of Candlestick Park.

Lighting

The mixed-use development of vacant parcels and unused buildings with infill development would create new sources of light, particularly as residential uses are added to Third Street, and as transition areas are created between exclusively industrial areas and mixed use areas. As the Project envisions creation of development that takes advantage of the Third Street Light Rail Transit (LRT), creating a 24-hour community (office and commercial during the day, and residential at night), the mixed use areas are likely to require nighttime lighting in addition to any security lighting that would normally occur. These new sources of light would be typical of urban development elsewhere in San Francisco and would not generate obtrusive lighting that would be substantially visible from other neighborhoods.

The impact of lighting from Stadium Development Retail/Entertainment Center would depend on the combination of effects from stadium light towers, scoreboards, parking lot lights,

circulation traffic, the frequency of night games at the stadium, and architectural/perimeter lighting from the entire complex. While the existing stadium lighting would be replaced in kind with lighting for the new stadium, the new mall would be an ongoing, new source of light. The new mall would be open during some portion of the evening, and lights from the new mall, the parking lot, and vehicles would represent an unavoidable increase in overall lighting levels. The new mall lights would be seen from numerous vantage points and nearby residential areas. This substantial new source of light could adversely affect adjacent properties, which is considered a significant and unavoidable impact.

Bayview Connections Urban Open Space Project

As part of the Bayview Connections Urban Open Space Project, portions of Mendell Avenue and Oakdale Avenue at the Opera House block would be permanently closed to vehicle traffic. It would become new community space as part of an enhanced Opera House Plaza open space area for community functions. Additionally, the proposed Oakdale transit hub, at Third Street and Oakdale Avenue, would have transit shelters and a plaza.

As part of the Bayview Opera House Plaza Project, a significant new public space would be constructed adjacent to the Opera House on Third Street. This pedestrian and streetscape improvement project would create a greater visual cohesion between the Southeast Community Facility and the Third Street Opera House Block. Oakdale and Palou Avenues would have landscape and street improvements, including increased street lighting, street trees and infill planting, street furniture, designated bicycle lanes, and street bulb-outs, which would echo the streetscape improvements along the Third Street corridor.

In addition, a proposed senior housing project would be constructed across the street at McKinnon Street, east of Third Street. The new buildings would block a portion of the west elevation of the Bayview Opera House from Third Street. The historic north façade, however, would remain visible from Third Street and McKinnon Street. While the proposed senior housing project would be a major new addition to this area in terms of scale and bulk, it would be expected to be generally compatible with adjacent development.

These improvements would not affect mid- or long-range views of Bernal Heights to the west and Silver Terrace to the north. The addition of landscaping and removal of vehicle access would examine the existing conditions. In general, the Bayview Connections Urban Open Space Project would have a beneficial aesthetic impact.

SHADOW

The Project includes rezoning within the Project Area. In some cases, rezoning could increase the potential height of new development in excess of 40 feet, which could potentially shade recreation and open space areas under the jurisdiction of the Recreation and Park Department. The Project would incorporate existing *San Francisco Planning Code* controls that apply to the Project Area, and new development in the Project Area would be subject to *Planning Code* Sections 146, 147, and 295 regarding new shadows. New structures proposed over 40 feet in height would be subject to Section 295 review of shadow effects on Recreation and Park Department property.

WIND

In developed areas, buildings that are about 100 feet or more in height can redirect wind flows around buildings and divert winds downward to street level, which can result in increased wind speed and turbulence at street level. The extent and magnitude of wind effects caused by new buildings in the area would depend on the actual design, height, bulk, placement of each specific structure in relationship to prevailing winds, adjacent buildings, streets, and open space areas.

A building that is surrounded by taller structures is not likely to cause adverse wind accelerations at ground level, while even a small building can cause wind problems if it is freestanding and exposed. For example, the proposed mall in the Candlestick Point Activity Node would not result in a significant wind impact because the 60 foot tall mall would be sheltered by the 200-foot tall stadium.

Buildings over a height of 100 feet could be planned in portions of the Candlestick Point Activity Node, and these new taller buildings could adversely affect the street-level wind

environment. However, design information is not yet available for specific buildings and no further conclusion can be made at this time. Although Section 148 of the *Planning Code* does not apply to the Project Area, wind evaluations would be required for future development for those projects that propose buildings within these specific activity nodes, which would exceed 100 feet in height. These wind evaluations would focus on the potential for hazardous winds and would evaluate the need for building redesign, windbreak features, or further detailed wind-tunnel studies of structures proposed in the future. The building design and review process for each specific project would require analysis and mitigation of any hazardous wind effects. Wind impacts would be evaluated on a project-by-project basis.

CULTURAL RESOURCES

Prehistoric and Historic Archaeological Deposits

Documented prehistoric and historic archeological deposits are located within the Northern Gateway, Town Center, and South Basin Activity Nodes, although archaeological sites could be located throughout the Project Area, as described in Section III.J, Setting. The Project calls for development activities to occur on infill sites. Ground-disturbing activities in close proximity to these sites could damage or destroy archeological resources potentially eligible for inclusion in the CRHR. In addition, development in these areas would greatly increase the possibility of encountering other related and/or similar resources potentially eligible for inclusion in the CRHR. As a result, development on or near these locations could lead to potentially significant impacts to prehistoric and historic archaeological deposits (see Mitigation Measure 12).

Potentially Historic Structures

No historic structure have been identified within Candlestick Point Activity Node. Properties within the Northern Gateway Activity Node, Town Center Activity Node, Health Center Activity Node, Oakinba Activity Node, South Basin Activity Node, and Hunter's Point Shoreline Activity Node have been assigned a status code of "3," "4," or "5." (see Table B-1 in Appendix B).

The Project calls for a significant amount of new construction to occur on underutilized parcels and vacant infill opportunity sites within these activity nodes. Construction activities directed toward any of the properties assigned a status code of “3,” “4,” or “5” requiring demolition, relocation, or substantial alterations to the structure or its immediate surrounding, such that the structure’s potential historic significance would be materially impaired, would be a significant effect on the environment. This would be considered a potentially significant impact (see Mitigation Measure 12).

TRANSPORTATION

Traffic Impacts

The transportation analysis for this EIR reviewed 15 intersections serving the Project Area; 15 study intersections operate at acceptable levels of service in the PM peak hour (LOS D or better). The six study intersections evaluated for the midday peak hour would operate at satisfactory conditions on weekends. During the weekday evening peak hour the Third Street/Cesar Chavez Street, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Street and Cesar Chavez Street/Evans Avenue intersections would operate at LOS F in all future scenarios.

The Project’s traffic contribution to the following six intersections would be considered significant adverse effects:

- Third Street/Cesar Chavez Street;
- Third Street/Evans Avenue;
- Bayshore Boulevard/Paul Avenue;
- Bayshore Boulevard/Silver Avenue;
- Bayshore Boulevard/Industrial Way/Alemany Boulevard; and
- Cesar Chavez Street/Evans Avenue.

The additional trips generated by the Project would deteriorate levels of service to unacceptable levels at seven study intersections, in the weekday PM peak hour. The

intersection of Third Street/Cesar Chavez Street would be considered to have a significant unavoidable impact since no mitigation is available to improve LOS to an acceptable level.

Transit Impacts

The Project would generate approximately 10,766 new transit trips (5,323 inbound; 5,443 outbound) new transit trips on a typical weekday and 889 trips (458 inbound; 431 outbound) during PM peak hour. The majority of the transit trips would be generated by the Candlestick, Health Center and the Hunters Point Shoreline Activity Nodes. There would be a net increase of 858 MUNI riders during the PM peak hour within the Project Area. The estimated MUNI ridership also includes transfers to the regional transit carriers, such as AC Transit, Golden Gate, SamTrans and BART. All MUNI bus lines would operate substantially below capacity for both inbound and outbound directions, except the west screenline in the inbound direction. Over 31,000 transit trips currently cross the three regional screenlines. More than half (69 percent) of transit trips cross the East Bay screenline, with approximately 82 percent of these trips on BART. Approximately 3,890 trips cross the North Bay screenline, mostly on the Golden Gate Transit buses. Approximately 5,840 trips cross the South Bay screenline, with approximately 54 percent of these trips on BART. All regional transit providers currently operate at less than their design capacity (meaning seats are generally available), except BART in the East Bay Corridor. BART East Bay corridor would operate at 120 percent capacity, which would near its capacity threshold of 135 percent.

Pedestrian Impacts

The Project would generate approximately 2,210 net new pedestrian trips on a typical weekday during PM peak hour. As most of the streets in the Study Area have sidewalks and the estimated pedestrian trips would be dispersed throughout the Project Area, no significant pedestrian impacts would be expected. It is anticipated, however, that there would be a moderate increase in pedestrian trips at the crosswalks near the LRT stations along Third Street. This increase would not impact the operations of the existing crosswalks. It should be noted that currently, however, several streets on the west side of Third Street do not have complete sidewalks and crosswalk painting is faded.

Bicycle Impacts

The Project would generate approximately 79 new bicycle trips on a typical weekday during the PM peak hour for the Study Area. There are currently eight bicycle routes in Bayview Hunters Point, one of which has designated bicycle lane (Route 68) and one of them has wide curb lanes (Route 7). As these 79 bicycle trips would be dispersed throughout the Project Area during the PM peak hour, no significant pedestrian impacts would be expected.

Parking Impacts

A parking demand analysis used the methodology established in the *SF Guidelines*. The Project would generate demand for approximately 9,150 to 10,630 parking spaces of which 6,621 would be long-term parking (4,070 to 5,550 for residential uses and 2,551 for non-residential uses) and 2,530 would be short-term parking.

It is anticipated that specific development would meet *Planning Code* parking requirements. As presented in the Setting, sections of the Project Area have available parking. In general, parking is more constrained in portions of the industrial areas and along Third Street.

Loading Impacts

Loading demand was estimated based on the methodology presented in the *SF Guidelines*. The Project would generate a demand for approximately 32 loading spaces during an average hour and 40 spaces during the peak hour. It is recommended that the Redevelopment Agency, Planning Department, and Municipal Transportation Agency should establish procedures and requirements for detailed operational level analysis as specific development projects advance through the City's review process.

Goods Movement

The amount of truck trips in 2025 would be approximately 77 during the average hour and 96 during the peak hour. It is anticipated that these trucks would use major arterials such as Third Street to access the freeways and industrial and retail destinations in the Project Area. Therefore, these roads will experience additional truck traffic.

Construction Impacts

Potential construction impacts for individual developments in the Project Area due to implementing the Project are not considered significant as they are temporary and of short-term duration. The City of San Francisco has established requirements and procedures for construction projects. Specific impacts for each development would be analyzed on a project-by-project basis.

AIR QUALITY

To perform a plan-level analysis, as suggested by the BAAQMD to evaluate the air quality impacts resulting from implementation of a Redevelopment Plan, the population estimates of the Project were compared to the population assumptions in the 2000 Clean Air Plan. The Project population assumptions are based on the San Francisco cumulative growth scenario of one percent from 2000 to 2025 (based on ABAG Projections 2002), while the 2000 Clean Air Plan population growth assumption is 1.1 percent for the region. Therefore, population growth for the region will not exceed the values included in the current 2000 Clean Air Plan.

Future vehicle trips were based on data from the San Francisco Transportation Authority's citywide travel forecasting model. This model assumes that increases in vehicle miles traveled are lower in the future than the rate of increase in population for the City of San Francisco because of patterns of public transportation in San Francisco. This is consistent with the current 2000 Clean Air Plan population and growth assumptions for vehicle-miles traveled, and shows consistency of the Project with the *San Francisco General Plan* and the 2000 Clean Air Plan.

In addition, the *San Francisco General Plan* is consistent with the 2000 Clean Air Plan because it has adopted and implemented the 2000 Clean Air Plan Transportation Control Measures into the *General Plan's* Transportation Element. The Project would be consistent with the *General Plan* policies regarding Transportation Control Measures and would, therefore, be consistent with the 2000 Clean Air Plan Transportation Control Measures.

In addition to the regional contribution to the total pollution burden, traffic due to implementing the Project could result in localized CO hot spots stagnation points, such as major intersections and heavily traveled and congested roadways. However, based upon the CALINE4 model, which is used to estimate CO concentrations for the seven worst intersections that operate at an LOS D or worse (see Section III.C, Transportation) under existing conditions, future year 2025 cumulative conditions, and future year 2025 cumulative-plus-project conditions, congestion at these intersections not violate federal or state CO standards.

Demolition and construction activities can generate emissions that impact air quality, including PM₁₀ emissions. The analysis of project construction impacts follows BAAQMD recommendations in focusing effort on the development of effective and comprehensive PM₁₀ control measures, rather than the detailed quantification of emissions, primarily because the mitigation measures outlined within the *BAAQMD CEQA Guidelines* would reduce temporary construction air quality impacts to less-than-significant levels.

With respect to Toxic Air Contaminants (TAC), California law and BAAQMD rules provide various mechanisms designed to protect sensitive receptors, including school siting procedures, BAAQMD permit procedures, BAAQMD review of TAC emissions, and provision of the Hot Spots program, when a sensitive receptor is located with 500 meters (1,640 feet) of a source of TACs. Nonetheless, without the ability to predict future TAC concentrations, and in the absence of specific standards of significance for risks from TACs, the significance of this potential impact is unknown.

NOISE

Construction-related noise impacts resulting from implementation of the Project would have a short-term effect at individual project locations. In addition to noise from the construction sites, construction activities would cause increased traffic noise along access routes to the development sites. However, construction activities in the Project Area would be conducted in compliance with the *San Francisco Noise Ordinance* (Article 29, *San Francisco Police Code*). Section 2908 of the *Noise Ordinance* prohibits construction work between 8:00 p.m. and 7:00

a.m., if noise would exceed the ambient noise level by 5 dBA at the project property line, unless a special permit is authorized by the Director of Public Works. Compliance with the *Noise Ordinance* would reduce any impacts to a less-than-significant level.

New development resulting from implementing the Project may introduce a variety of stationary sources of noise, including electrical and mechanical air conditioning equipment, most of which would be located on rooftops. Although noise levels from equipment sources may be annoying in a quiet environment, existing ambient noise conditions within the Project Area would generally mask on-site equipment noise. Noise levels from operation of equipment would result in an increase of ambient noise levels that would be less than significant.

In addition to air quality effects, traffic due to implementing the Project could result in noise impacts at major intersections. Project-related traffic could add more cars to area roadways, and could increase the noise associated with cause existing non-project traffic to travel at slower, less pollution-efficient travel speeds. Table III.I-5 presents noise levels at five locations associated with traffic increases in the Project Area. Weekday PM peak-hour traffic conditions were estimated for existing conditions, future conditions without the Project, and future cumulative conditions for year 2025. Development resulting from the Project would create a less-than-significant increase in noise levels in the Project Area, because the noise levels would not increase above 2.8 dBA. Nuisance noise is generally limited by the San Francisco Noise Ordinance to increases of 5 dBA above ambient conditions.

The Enhanced Truck Route Program would designate truck routes to divert traffic away from residential areas and would physically improve truck routes with landscaping appropriate for truck “parkways.” Streetscape amenities, such as increased lighting, wider sidewalks, and bicycle lanes would create streets that are intended to be safer for pedestrians. Although the specific routes are not finalized, it is assumed that the new truck routes would have an overall beneficial effect on the noise environment in the Project Area by focusing truck traffic on non-residential routes.

Existing traffic noise levels at most of the study locations near residential uses are high enough (above 65 dBA on the exterior of the building) for the *San Francisco General Plan* Environmental Protection Element to discourage new residential development unless noise reduction features are included in their design. New residential buildings are required to meet interior noise standards established in Title 24 of the *California Code of Regulations* and, therefore, include noise insulation based on existing noise levels at these sites.

Implementation of the Project could result in new or expanded retail and entertainment uses (such as the Stadium Development Retail/Entertainment Center) that could affect nearby residences. While the associated noise conditions may disturb residents occupying new buildings in the vicinity, noise effects would be limited by the noise insulation requirements for new residential construction, project review requirements for entertainment uses in the Project Area, and enforcement of the San Francisco Noise Ordinance.

The Project would mainly rezone existing industrial land uses to new PDR zoning designations that would create distinct industrial areas and residential uses mixed with commercial and PDR uses along the Third Street corridor. These land uses would not differ with existing land uses with respect to ambient noises; however, the rezoning would create a buffer or transition zone by placing light PDR zones between heavy PDR zones and residential and other sensitive receptors. While exterior noise levels may increase and result in associated interior noise level increases, these increases would not be of the magnitude to substantially alter the exterior noise environment and would not cause a significant impact.

HAZARDOUS MATERIALS

Implementation of the Project would encourage growth and expansion of existing and new businesses, some of which could be industrial, which could use, handle, transport, or dispose of hazardous materials and hazardous wastes. The increased use of hazardous substances could increase the potential for exposure to workers, the public, and the environment. When handled properly and used in compliance with permitted and other regulatory requirements, such as Brownfields regulations and policies, the Polanco Redevelopment Act, the California Health and Safety Code, the California Land Environmental Restoration and Reuse Act, and

the San Francisco Health Code, hazardous substances are anticipated to not necessarily pose a human health concern or a threat to the environment. Although the risk of upset can never be completely eliminated, any future production or generation of hazardous materials would not be expected to create a public health or environmental hazard if adequate safety precautions are employed. This impact would be considered less than significant.

Because the extent of demolition or renovation that would occur due to the implementation of the Project is unknown, and the location and quantity of hazardous building materials within the Project Area is also unknown, the specific potential for worker and public exposure to hazardous building materials cannot be evaluated at this time. Potential exposure to hazardous materials must be evaluated on a case-by-case basis and would be subject to appropriate regulatory oversight.

Based on the nature and extent of identified sites containing hazardous materials, as well as historical and current land uses within the Project Area, the potential exists to encounter hazardous substances in the soil or groundwater during excavation and grading activities. Contaminated material may require special handling and disposal requirements if removed from the site. If hazardous substances were encountered during implementation of the Project, the need for site investigations and remediation would be determined on a case-by-case basis by the appropriate regulatory agency.

GEOLOGY

The Project Area is already a developed urban area, and future renovation or replacement of existing structures would not change the geological, soil, or seismic environment of the area. Nonetheless, because it is necessary to design structures and facilities to withstand the anticipated effects of geologic failure, such as seismic activity from nearby as well as distant faults or landslides, there is a comprehensive regulatory environment in place to ensure that risks to people and property are managed to the maximum extent practical. The major state regulations protecting the public from geo-seismic hazards, other than surface faulting, are contained in the California Code of Regulations, Title 24, Part 2, the California Building Code and the California Public Resources Code, Division 2, Chapter 7.8, The Seismic Hazards

Mapping Act. Both the California Building Code and the Seismic Hazards Mapping Act apply to public buildings and a large percentage of private buildings intended for human use or occupancy. On July 29, 2003, California adopted a new building code for most commercial construction, developed by the National Fire Protection Association, as the basis for updating the state's building code. The state also adopted the International Building Code as the basis for California's residential construction. Following incorporation of the new codes into the state's existing building code, and a series of public hearings, the revised code could become law as early as 2005. Project permits issued after the adoption of the law would be subject to the provisions of the revised code. At the local level, each individual development project resulting from implementation of the Project would be required to conform to the *San Francisco Building Code*, which includes seismic safety performance standards that apply to all new construction in the city. The San Francisco Department of Building Inspection (DBI) would, in its review of building permit applications, require that each individual development project prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of geologic hazard(s) on the site and recommend project design and construction features that would reduce the hazard(s).

To ensure compliance with all current *San Francisco Building Code* provisions regarding structural safety, when the DBI reviews the geotechnical report and building plans for each development proposal, it determines the necessary engineering and design features for the project to reduce potential damage to structures from geologic failure. Therefore, potential damage to structures in the Project Area would be mitigated to a less-than-significant level through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the *Building Code*.

HYDROLOGY AND WATER QUALITY

Groundwater dewatering may be required for construction of specific redevelopment projects; however, this temporary dewatering would not substantially affect groundwater resources, and discharge of any groundwater produced by dewatering to the sewer system would be regulated by a permit from the City. Further, groundwater is not used or planned as a potable water supply in this part of San Francisco. Flooding hazards are not an issue because, with the

possible exception of flooding due to inadequate sewer capacity, the Project Area is not subject to flooding and the Project would have no impacts on flooding.

Implementation of the Project would facilitate new development in the Project Area which, as a worst-case scenario, would generate increased year-round sanitary sewage flows to the combined sewer system and would result in no change in stormwater runoff. Because the combined sewer system is designed to overflow during intense storms and because the increase in sanitary sewage flows would occur year-round, the Project could indirectly result in cumulative, long-term contributions to an increase in average volume of CSO discharges in the Project Area.

However, compliance with the following existing regulations and policies would protect water quality and beneficial uses of the Bay:

- The Project Sponsor would be required to coordinate with the SFPUC to ensure that new developments resulting from implementation of the Project would remain in full compliance with all aspects of the federal CSO Control Policy, including the nine minimum controls and appropriate pretreatment and pollution prevention programs. This includes compliance of all new developments with Article 4.1 of the San Francisco Public Works Code during both construction and operation. This would ensure consistency with existing water quality regulation protecting Bay water quality.
- The Project Sponsor would be required to comply with conservation of water use consistent with existing and future guidelines recommended by the SFPUC. This would reduce the volume of sanitary flow to the combined sewer system.
- The Project Sponsor would be required to incorporate recycled water use in planning and design (i.e., install dual plumbing) of major new developments consistent with guidelines in the Recycled Water Ordinance and the Recycled Water Master Plan Update, when adopted. This would reduce the volume of sanitary flow to the combined sewer system.

In addition, concurrent with the proposed schedule for implementation of the Project, the SFPUC has numerous ongoing planning efforts that address CSO discharges and associated water quality impacts as part of citywide plans and programs. These planning efforts address long-term objectives of compliance with existing and future regulatory requirements and overall protection of water quality, aquatic resources and beneficial uses of San Francisco Bay. Any activities associated with the Project that could affect wastewater and stormwater management must be conducted within the context of the existing regulatory framework, but

also coordinated within the context of ongoing and future citywide planning efforts. Coordination of the Project with these plans would provide additional protection of water quality and beneficial uses.

BIOLOGICAL RESOURCES

The Project Area is almost entirely built out and supports no known sensitive species. Also, the Project does not have specific physical elements other than those associated with changing truck routes, land use designations, and improvements to existing landscaping. For these reasons, implementation of the Project does not exceed the significance criteria as they relate to sensitive species, wildlife movement, or species diversity. Implementation of the Project may result in impacts to wetland habitat, street trees, and nesting birds. Although these elements are discussed and mitigation measures is proposed, it is expected that site-specific environmental evaluation would be conducted for site-specific individual projects that fall within the Project Area.

Construction activities within or near shoreline portions of the Project Area could directly impact wetlands, mud flats, or salt marsh habitats in a variety of ways, including placement of fill, structures, or alteration of habitat. Any activities within these areas could result in loss of sensitive habitats or species that use these habitats. Impacts to these sensitive habitats could be considered potentially significant (see **Mitigation Measure 17**).

Construction activities associated with the Project would generally be limited to existing paved streets or disturbed areas. Street trees within the Project Area are not sensitive species. However, there is potential that damage to existing street trees and other mature vegetation (as a result of injury to roots, trunk, or branches) could occur at any construction site within the Project Area. Because they are regulated by the Urban Forestry Ordinance, damage to, or removal of, existing mature trees could be considered a potentially significant impact (see **Mitigation Measure 18**).

Removal of street trees and other landscape vegetation could also result in disturbance or mortality of adult or juvenile resident bird species. Disturbance could result in nest abandonment. Because of the high levels of development and human activity in the Project

Area, only common urban bird species are likely to nest in street trees. No special-status species are known to nest within the Project Area. For these reasons, removal of street trees and landscape vegetation would not surpass the significance criteria for this project and would be considered a less-than-significant impact; therefore, no mitigation is required. Depending on the timing and species affected, vegetation removal could result in a potential violation of Fish and Game Code (Sections 3503, 3513, or 3800) if it would result in destruction of bird nests. It is expected that the project sponsor would comply with the applicable regulations. Although this impact is considered less than significant, the following improvement measure is provided to facilitate compliance with state and federal laws related to the protection of nesting birds (**see Mitigation Measure 19**). With implementation of Mitigation Measures 17 through 19, all impacts would be reduced to a less-than-significant level.

PUBLIC SERVICES AND UTILITIES

Police Protection

As of July 2004, the SFPD had approximately 100 sworn personnel in the Bayview Station and maintained a ratio of 3.8 sworn personnel per 1,000 City residents based on the 26,249 residents in the Project Area. Implementation of the Project (6,146 residential units) would increase the residents within the Project Area by approximately 20,896 persons. In order to maintain the service ratio of 3.8 sworn personnel per 1,000 City residents and meet the needs of the City, the SFPD would need to provide an additional 80 officers (79.4) under the Project buildout by 2025.

The ability of the SFPD to support the needs of future growth is dependent upon its financial ability to hire additional sworn personnel. As stated previously, the Mayor's 2004-2005 budget includes funding to hire 40 new police officers within the SFPD. Although it is currently unknown what stations these new officers will be assigned to, it is assumed that this increase and other potential increases in sworn personnel could be assigned to the Bayview Station as a result of project implementation. Since the existing Bayview Station was constructed in 1997, it is assumed that this facility would be able to provide adequate space for some of the additional 80 sworn officers that would be needed as a result of the Project

buildout. However, this increase in personnel and likely related increase in police facilities is a less-than-significant impact as new development would be subject to impact fees that could be used to construct new facilities.

Further, it should be noted that in as much as the SFPD bases its future growth and projections upon the Association of Bay Area Governments (ABAG) projections, the population increase as a result of the Project has already been assumed under the ABAG 2025 projections for the City as a whole. In addition, if successful, the Project would eliminate blight that is currently prevalent in the area through the development of affordable housing; provisions for retail, commercial, and community space; and overall economic and community enhancement. These physical improvements could help lessen illegal activities through the introduction of new residents and a revitalized commercial district along Third Street.

Fire Protection

The SFFD does not have adopted standards or performance objectives for response times or service ratios. However, development associated with the Project would be required to comply with all regulations of the 2001 California Fire Code, which establishes requirements pertaining to fire protection systems, including the provision of state-mandated smoke alarms, fire extinguishers, appropriate building access, and emergency response notification systems. As stated previously, the SFFD currently maintains average emergency response times with existing equipment of approximately 2.5 minutes to 4.5 minutes to the Project Area. The SFFD has stated that the existing fire protection services in the Project Area are adequate, and that development under the Project could cause delays in response due to traffic concerns and added call volume.

One of the most important criteria for effective firefighting is the response time needed to reach the site of the fire. Existing stations are strategically located to ensure adequate service within the Project Area. Nevertheless, additional development at buildout under the Project would increase the number of residents and employees residing in the Project Area, as well as increase the total number of structures. In addition, implementation of the Project could cause delays in response times due to traffic concerns and added call volume. Based on the potential

for increased medical calls, responses to alarms, and increased traffic in the area, the SFFD has stated that another ambulance and possibly another engine company would be necessary to serve the Project Area. However, as also noted by the SFFD, Project Area redevelopment and associated revenues would constitute a contributory impact on the city as a whole, as future revenues could be used to help maintain firehouses in the area if deemed necessary by the City. This, combined with the relatively dispersed and incremental nature of proposed development, would result in a less-than-significant impact on fire services. In addition, developer impact fees would be assessed that could be used to construct new facilities.

The quantity of water required for fire protection (i.e., fire flows) varies and is dependent upon many factors that are specific to each particular building, such as the floor area, type of construction, expected occupancy, type of activities conducted within the building, and the distance to adjacent buildings. Due to the possibility of a fire occurring on any given day, the required fire flow in the Project Area must operate with maximum-day demands occurring elsewhere throughout the water system. Since project-specific fire flows and fire-flow demand rates are not currently available, this analysis relies on a worst-case scenario, or maximum demand of fire flow requirements, as found in Appendix IIIA of the California Fire Code. The maximum fire flow that any structure or project site would require is 8,000 gallons per minute (gpm) for a duration of four hours. It should be noted that exceptions to this occur when the building is provided with an approved automatic sprinkler system, in which a reduction of 75 percent of the fire flow is allowed. As such, with the provision of sprinkler systems for structures throughout the Project Area, the maximum fire flow required would be 2,000 gpm. However, all development plans would be reviewed by the SFFD prior to construction to ensure that adequate fire flows would be maintained (including localized pipe upgrades or connections that might be required to connect new buildings to the system), and that an adequate number of fire hydrants would be provided in the appropriate locations in compliance with the California Fire Code. Therefore, although the existing fire flows are unknown, adequate fire flows would be required by law prior to construction.

Schools

The increase of approximately 1,248 students within the SFUSD in the Study Area would increase enrollment in the schools serving the project area to approximately 3,845 students, which could reach the existing capacity of these schools. As this is a conservative analysis of the Study Area, and the SFUSD anticipates a decrease in the student population over the next ten years, new or expanded school facilities are not anticipated to be required as a direct result of implementation of the Project. In addition, as discussed in the SFUSD Facilities Master Plan, enrollment is anticipated to decrease over the next ten years and result in an increase in excess capacity, which would ensure that the additional students resulting from implementation of the Project would be provided with sufficient educational facilities to meet their academic needs. With the anticipated increase in excess capacity throughout the SFUSD over the next ten years, impacts to school services are considered a less-than-significant impact within the Study Area.

Libraries

With implementation of the Project, it is anticipated that approximately 20,896 residents with an associated 6,146 dwelling units would occur at buildout. This increase in residents would substantially intensify the demand for library services and facilities as well as community centers, and may require new construction. As stated in the San Francisco Public Library Strategic Plan (2003-2006), there is no national standard for library service. Instead, each library must evaluate how it may best meet the needs of the community. To this end, the San Francisco Public Library has developed a Strategic Plan that provides every library facility and program with a unifying organizational vision and system-wide goals. These goals are broad and flexible enough to tailor services to each unique neighborhood. The Strategic Plan also provides a framework to consider opportunities for new programs and services.

As stated previously, the Branch Library Improvement Program, which is currently underway, will renovate 19 branches, replace four leased facilities with City-owned branches, and construct a new branch in Mission Bay. Thus, because the Bayview/Anna E. Waden library branch is included in this planned upgrade, and because the Strategic Plan outlines continuous

measures to maintain and improve the existing library facilities for the surrounding communities, it is anticipated that the upgraded facilities would be able to accommodate the increase in residential population as a result of the Project.

In addition, new development would contribute revenue from property taxes to the City fund, which could be used to fund library services, if the City deemed necessary. In addition, new development would also be subject to development impact fees that could be used to construct new library facilities or expand existing libraries.

Parks

The increase in residents and visitors anticipated by the project would likely increase the demand for new or expanded recreation facilities. The Community Enhancements Program will both add open space and new recreation areas, as well as provide for their long-term maintenance. These planned open space projects are expected to convert industrial uses to open space and recreational uses and in the case of shoreline parklands, would open up views of the bay that are currently blocked by industrial development or are inaccessible to the public. Because the existing project area is predominantly industrial, increasing park services and open space would have no adverse impacts, and could even result in a positive beneficial impact to the community.

Water Supply

Senate Bills 221 and 610 require a water provider to furnish substantial evidence that adequate water supplies would be available to meet the water demands of new customers through normal and single-dry and multiple-dry years for a 20-year period. This evidence is established in a project-specific water supply assessment (WSA) or an Urban Water Management Plan. The Project would include development of about 2.4 million square feet of mixed uses. New population in the Project Area would include about 20,896 new residents and about 5,308 net new employees. Water generation factors are based on population with 60 gallons per day for residents and 35 gallons per day per employee for all commercial and institutional uses. At build-out in 2025, all development due to implementation of the Project would use about 1,439,540 gallons per day of water. Development and population growth

associated with the Project would be within the ABAG Year 2000 Projections, and as such, the project would not be required to obtain a water assessment from the SFPUC. Because the Project would be within expected growth projections for the City, less-than-significant water supply impacts are anticipated.

Wastewater

The Project would create about 2.4 million square feet of mixed uses. Generation factors from the 1998 Mission Bay Subsequent Environmental Impact Report were used to determine daily wastewater demand for the Project. At buildout in 2025, all development would generate approximately 940,336 gallons of wastewater per day, as presented in Table III.O-4. Because the Project would be within expected growth projection for the City, less-than-significant impacts on wastewater treatment capacity are anticipated.

Solid Waste

Residents in the Project Area would be expected to generate approximately 9,250 pounds of solid waste per day, and approximately 3,376,250 pounds per year (365 days). The Project Area is expected to have 2.4 million square feet of development, which would be expected to generate 39,971 pounds per day and 10,392,460 pounds per year (260 weekdays) of solid waste, as presented in Table III.O-5.

In 2002, San Francisco generated a total of 1,882,490 tons of solid waste, of which 702,012 tons (or 37 percent) were disposed of in the Altamont Landfill and 1,180,478 tons (or 63 percent) were diverted from the solid waste stream through recycling, composting, reuse, source reduction, and other efforts. It is anticipated that the City will continue to improve solid waste service, in order to achieve the recycling goal of 75 percent by 2010, as adopted by the Board of Supervisors in 2002. In addition, the Altamont Landfill is assumed to remain operational for another 19 to 28 years, with an increase of 250 acres of fill area under the expansion plan.

An expansion to the Altamont Landfill was recently approved through a CUP, and a new solid waste facilities permit is anticipated to be approved in summer 2004, extending the facility's

lifespan and increasing the landfill capacity by 40 million tons. Thus, the solid waste disposal demand within the City can be met through 2026, at the very least, once expansion of the Altamont Landfill occurs.

Because of the presumed increase in solid waste recycling and the proposed landfill expansion in size and capacity, the impacts on solid waste from implementation of the Project would be less than significant.

ENERGY

Implementing the Project would result in the consumption of energy in the form of electricity, natural gas, and fuel (gasoline and diesel) during both construction and operation of new buildings. New and remodeled buildings resulting from the Project would be regulated by the Energy Efficiency Standards of Title 24. Compliance with Title 24 would be enforced by the San Francisco Department of Building Inspection through the building permit review process before commitment of energy resource would occur. Compliance with Title 24 would ensure that new buildings resulting from implementation of the Project would not use fuel or energy in a wasteful manner. The additional energy consumption in terms of operational or construction demand would not, by itself, require significant additional capacity in the area that could have an adverse physical effect on the environment.

Although energy costs and environmental impacts of energy consumption may vary with increases in future demand and potential scenarios that may evolve to meet such demand, it is reasonable to expect that the availability of electricity, natural gas, and other fuels will be sufficient to meet energy demand over the next 10 to 20 years.

D. MITIGATION MEASURES

The analysis in Chapter III identifies potential significant environmental effects that could occur from development under the Project. Most of those significant adverse effects could be reduced or eliminated through implementation of the mitigation measures that have been recommended. Development projects proposed in the Project Area would be reviewed by the San Francisco Planning Department, and mitigation measures would be included as part of

project plans, or required under Conditional Use or other approval processes. The mitigation measures that would reduce adverse environmental effects are comprehensively identified in Chapter IV, Mitigation Measures, of this document, and are also provided below for case of reference. Mitigation measures identified in this EIR would be required by decision makers as conditions of project approval unless they are demonstrated to be infeasible based on substantial evidence in the record.

PLANS AND POLICIES

There would be no significant or potentially significant impacts with respect to plans and policies; therefore, no mitigation measures are required.

LAND USE AND ZONING

There would be no significant or potentially significant impacts with respect to land use and zoning; therefore, no mitigation measures are required.

EMPLOYMENT, POPULATION, AND HOUSING

There would be no significant or potentially significant impacts with respect to employment, population, and housing; therefore, no mitigation measures are required.

TRANSPORTATION AND CIRCULATION

Mitigation Measure 1: Third Street/Cesar Chavez Street

With the installation of the Third Street LRT, Third Street at Cesar Chavez Street will provide one left turn lane, one through lane, and one shared through-right lane at the northbound approach. To mitigate the project's impact at this intersection, one additional northbound left turn lane would need to be provided. This mitigation measure would result in operating conditions of LOS E (68.8 seconds of delay), with less delay experienced than in the no-project conditions.

Due to the Third Street LRT, space could not be taken from the center of Third Street. Parking will not be allowed in either direction on Third Street. To accommodate the additional space needed for a second left turn lane, Third Street would need to be widened to the east. Additional right-of-way acquisition would be necessary in the northeast and southeast quadrants of the intersections to facilitate the widening of Third Street. This would require the demolition of two warehouse structures.

The Department of Parking and Traffic (DPT) evaluated this mitigation measure and identified it to be infeasible, because of the need to acquire right-of-way with existing structures. Thus, this impact is considered significant and unavoidable.

It should be noted that the *Third Street Light Rail Project FEIR* identified cumulative traffic impacts at the Third Street/Cesar Chavez intersection as significant and unavoidable. No mitigation measures were provided by the Third Street Light Rail Project.

Mitigation Measure 2: Third Street/Evans Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. The Third Street LRT design for this intersection provides Third Street with one through lane and one shared through-right lane in both the northbound and southbound directions at its intersection with Evans Avenue. There will be left turn lanes in both directions on Third Street. The eastbound approach on Evans Avenue will have one left turn lane, one through lane, and one shared through-right lane. The westbound approach on Evans Avenue will have one left turn lane, two through lanes, and one right turn lane.

A second left turn lane would be necessary on the westbound approach on Evans Avenue. Space for the additional left turn lane would be obtained by removing the on-street parking allowed on the roadway at this westbound approach. Two-hundred feet of parking (approximately 8 parking spaces) would be removed to accommodate a 200-foot-long right turn lane. Each of the traffic lanes on the westbound approach would be shifted to the north to accommodate the additional left turn lane.

The eastbound shared through-right lane would be converted into one through lane and a separate eastbound right turn lane would be added on Evans Avenue. The right turn lane would be a minimum of 100 feet long. The roadway centerline at the eastbound approach would be moved approximately 10 feet to the north. Space for the additional right turn lane would be obtained by removing the on-street parking located adjacent to the westbound receiving lanes at the eastbound approach.

These mitigation measures would require the acquisition of approximately 15 feet of right-of-way from the parcel on the north side of Evans Street between Third Street and Phelps Street (the northwest intersection quadrant). This additional space would allow for an adequate alignment of the westbound through movements crossing Third Street.

In addition, a second left turn lane would be necessary on the northbound approach on Third Street. This mitigation measure would require the acquisition of approximately 10 feet of right-of-way from the parcel on the east side of Third Street (northeast quadrant). This would result in moving the sidewalk 10 feet east on Third Street.

This mitigation measure would result in operating conditions of LOS F (61.9 seconds of delay), with less delay experienced than in the no-project conditions.

Acquiring right-of-way at this intersection would not be possible without displacing existing businesses and structures. The DPT evaluated this mitigation measure and identified it to be infeasible. Thus, this impact is considered significant and avoidable.

Mitigation Measure 3: Bayshore Boulevard/Paul Avenue

Changes to the signal phasing at this intersection would have to be made to mitigate the project's impact at this intersection. Currently, the left turn movements on northbound and southbound Bayshore Boulevard operate with permitted left turns. These movements would be converted to protected left turn movements. No changes in intersection geometry would be made. This mitigation measure would result in operating conditions of LOS D (41.6 seconds of delay), with less delay experienced than in the no-project conditions.

Mitigation Measure 4: Bayshore Boulevard/Silver Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Currently, the eastbound approach on Silver Avenue has a shared left-turn and through lane and shared through and right-turn lane. To mitigate the impact at this intersection, an exclusive eastbound right-turn lane would need to be added. The proposed eastbound approach would consist of a shared left-turn and through lane, through lane and an exclusive right turn lane. To provide the right-turn lane the existing US 101 overcrossing would need to be widened. This mitigation measure would result in operating conditions of LOS F (V/C ration of 1.71), with less delay experienced than in the 2025 Base Scenario.

However, the DPT evaluated this mitigation measure and identified it to be infeasible because of the widening of the overcrossing. Thus, this impact is considered significant and unavoidable.

Mitigation Measure 5: Bayshore Boulevard/Industrial Way/Alemany Boulevard

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Currently, the northbound approach on Bayshore Boulevard has one left turn lane, two through lanes, and one shared through-right lane. To mitigate the impact at this intersection, a second exclusive left turn lane would need to be added. The two receiving lanes on the west leg would accommodate the two northbound left turn lanes. In order to provide the second exclusive left-turn lane, the buildings and residences in the southeast quadrant of this intersection would have to be demolished. This mitigation measure would result in operating conditions of LOS F (77.6 seconds of delay), with less delay experienced than in the no-project conditions.

The DPT evaluated this mitigation measure and identified it as infeasible because right-of-way would need to be acquired in the southeast and southwest quadrants of the this intersection to mitigate this impact, which would require the demolition of existing businesses. Thus, this impact is considered significant and unavoidable.

Mitigation Measure 6: Cesar Chavez Street/Evans Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Evans Avenue provides one left-turn lane and one shared left-right lane on the northbound approach at its intersection with Cesar Chavez Street.

The *FEIS* for the *Disposal and Reuse of Hunters Point Shipyard* identified a project impact at the Cesar Chavez Street/Evans Avenue intersection and proposed the re-striping of the northbound approach to consist of two left turn lanes and a right turn lane. Structural modifications to the viaduct would be necessary to provide a proper curb return for right turn movement.

These changes would also mitigate the Project's impact. This mitigation measure would result in operating conditions of LOS F (V/C ratio of 1.5), with less delay experienced than in the no-project conditions.

Mitigation Measure 6A: US 101 South of I-280 (Northbound Direction)

Northbound US 101 south of I-280 would need to be widened to mitigate this impact. However, acquiring additional right-of-way in this section without the demolition of existing residences and businesses is not feasible. This impact is considered significant and unavoidable.

VISUAL QUALITY

Mitigation Measure 7: The Bayview Hunters Point Design Guidelines would prevent glare in new development by requiring:

- Lighting would be used to illuminate businesses and improve sidewalk visibility and increase building safety.
- Indirect lighting onto signs and the building façade would be encouraged. This would supplement the street lighting for pedestrians and would identify the building and its business occupants.
- Auxiliary security lighting (i.e., floodlights) would be shielded from public view.

SOLAR ACCESS AND SHADING

There would be no significant or potentially significant impacts with respect to solar access and shading; therefore, no mitigation measures are required.

WIND

There would be no significant or potentially significant impacts with respect to solar access and shading; therefore, no mitigation measures are required.

AIR QUALITY

Mitigation Measure 8: The following are construction mitigation measures adapted from the *BAAQMD CEQA Guidelines*:

The project sponsor shall prepare and implement a dust control plan. The plan shall be submitted to the City of San Francisco Public Works Department, which would be responsible for field verification of the plan during construction. The plan shall comply with the City grading ordinance. To reduce particulate matter emissions during construction and demolition phases, the contractor shall include in the dust control plan dust control strategies recommended by the BAAQMD. The project sponsor shall include the following measures, as appropriate, in the plans and specifications for construction contracts, and in the dust control plan.

Basic Control Measures: to be implemented on all construction sites.

- Cover all trucks hauling construction and demolition debris from the site;
- Water all exposed or disturbed soil surfaces at least twice daily;
- Use watering to control dust generation during demolition of structures or break-up of pavement;
- Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved parking areas and staging areas;
- Sweep daily (with water sweepers) all paved parking areas and staging areas;
- Provide daily clean-up of mud and dirt carried onto paved streets from the site.

Enhanced Control Measures: to be implemented at construction sites greater than four acres in area.

- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles of soil, sand, etc.;
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible.

The following are mitigation measures that would reduce, but not eliminate, the possibility that the risks from TAC emissions from individual facilities within the Project Area could result in risks above BAAQMD significance thresholds for projects:

Mitigation Measure 9: Prior to issuing a certificate of occupancy for a facility containing potential TAC sources, obtain written verification from BAAQMD either that the facility has been issued a permit from BAAQMD, if required by law, or that permit requirements do not apply to the facility.

Mitigation Measure 10: Prohibit dry cleaning facilities that conduct on-site dry cleaning operations from residential areas within the Project Area. For any dry cleaning operations within the Project Area, require vapor barriers in their design and construction so as to reduce exposure to TACs handled at the facility.

Mitigation Measure 11: Require preschool and child care centers to notify BAAQMD and the San Francisco Department of Public Health regarding the locations of their operations, and require these centers to consult with these agencies regarding existing and possible future stationary and mobile sources of TACs. The purpose of these consultations is to obtain information so that preschool and child care centers can be located to minimize potential impacts from TAC emission sources.

NOISE

There would be no significant or potentially significant impacts with respect to noise; therefore, no mitigation measures are required.

CULTURAL RESOURCES

Mitigation Measure 12: Prior to any ground-disturbing activities within the Project Area at a depth of three feet below the existing grade, the archeology testing mitigation measures would be implemented.

Based on a reasonable presumption that archeological resources may be present within the Project Area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a

maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the Project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the Project, at the discretion of the project sponsor either:

- A) The Project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of

the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;

- The archeological monitors shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/ excavation/ pile driving/ construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the Findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.

- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 13: Based on the reasonable potential that archeological resources may be present within the Project Area, the following measures shall be undertaken to avoid any

potentially significant adverse effect from the Project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological monitoring program (AMP). The archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the project archeologist shall determine what project activities shall be archeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/ excavation/ pile driving/ construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the

ERO of the encountered archeological deposit. The archeological consultant shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, present the findings of this assessment to the ERO.

If the ERO in consultation with the archeological consultant determines that a significant archeological resource is present and that the resource could be adversely affected by the Project, at the discretion of the project sponsor either:

- A) The Project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

If an archeological data recovery program is required by the ERO, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The project archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP. The archeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.

- *Curation.* Description of the procedures and recommendations for die curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 14: The following mitigation measure is required to avoid any potential adverse effect from the Project on accidentally discovered buried or submerged historical resources as defined in *CEQA Guidelines* Section 15064.5{a}(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed

affidavit from the responsible parties (prime contractor, subcontractors), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the project sponsor.

Measures might include: preservation in situ of the archeological resource; an archaeological monitoring program; or an archeological testing program. If an archaeological monitoring program or archeological testing program is required, it shall be consistent with the Major Environmental Analysis (MEA) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 15:

- A. Prior to any physical removal of a historic resource, the project sponsor would prepare, or cause to be prepared, documentation of the historic resource in a Historic

Resource Documentation Report. Such documentation would follow an appropriate level of data collection, preparation of drawings, and photography based on the historic significance of the historic resource. The Agency in consultation with the Landmarks Preservation Advisory Board (LPAB) would select the level of documentation from the four levels (Documentation Level I, II, III, or IV) described in the Secretary of the Interior's Standards for Architectural and Engineering Documentation and Guidelines for Architectural and Engineering Documentation.

The documentation would be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*, published in the Federal Register, June 20, 1997 (Volume 62, Number 119). In addition to these qualifications, the Historical Architect would have demonstrated experience in not less than three projects meeting the Secretary of the Interior's Standards for Architectural and Engineering Documentation and Guidelines for Architectural and Engineering Documentation. One project must have been approved and accepted by the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), National Park Service.

The Historic Resource Documentation Report would be sent to the following repositories: History Room, San Francisco Public Library, and San Francisco Architectural Heritage.

- B. Prior to undertaking a rehabilitation project of a Historic Resource, the project sponsor would prepare, or cause to be prepared, a historic structure(s) report (HSR) for the historic resource. The HSR would set forth the history of the resource, describe and document its existing condition, make recommendations for repair, rehabilitation, replacement, reconstruction, and other treatments based on the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Secretary of the Interior's Standards). The HSR would act as a guide to the rehabilitation plan for the building(s).

The HSR would be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*, published in the Federal Register, June 20, 1997 (Volume 62, Number 119).

The project sponsor would retain the services of a Historical Architect as a member of the design team for the proposed rehabilitation project. The Historical Architect could be the same Historical Architect who prepared the HSR, without encountering a conflict of interest.

If not a member of the project team, the Historical Architect would review the rehabilitation plans prepared by the project architect for compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the

Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, and Section 1111.6. Standards and Requirements for Review of Applications for Alterations (Article 11).

The Historical Architect would make a report to the Landmarks Preservation Advisory Board concerning project compliance with the Secretary of the Interior's Standards. The LPAB would approve, approve with conditions, or disapprove the project design based on its evaluation using the Secretary of the Interior's Standards. The LPAB's decision would be final and not appealable.

C. The project sponsor shall prepare a plan for protection of adjacent historic resources. Such a plan would include the following:

- Storage of materials a sufficient distance away from the historic resource.
- Instructions to equipment operators making them aware of the historic resource and using caution when operating near the resource.
- Monitoring construction activities to assure implementation of the plan.
- The project sponsor shall consult with the San Francisco Landmarks Preservation Advisory Board (LPAB) to evaluate the Project's architectural compatibility with adjacent historic resources(s), as new development may differ in scale, design or materials than the existing older structures, and could change the context of historic resources.

Mitigation Measure 16: Prior to undertaking a rehabilitation project as proposed under the Façade Renewal Program, the City or Agency shall prepare a historic structure(s) report (HSR) for the historic resource(s) to be affected. The HSR would set forth the history of the resource, describe and document its existing condition, make recommendations for repair, rehabilitation, replacement, reconstruction, and other treatments based on the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Secretary of the Interior's Standards). The HSR would act as a guide to the rehabilitation plan for the building(s).

The HSR shall be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*. The Historical Architect would make a report to LAPB concerning project compliance with the Secretary of the Interior's Standards. The LPAB would approve, approve with conditions, or disapprove the project design based on its evaluation using the Secretary of the Interior's Standards.

HAZARDS AND HAZARDOUS MATERIALS

There would be no significant or potentially significant impacts with respect to hazards and hazardous materials; therefore, no mitigation measures are required.

GEOLOGY AND SOILS

There would be no significant or potentially significant impacts with respect to geology and soils; therefore, no mitigation measures are required.

HYDROLOGY AND WATER QUALITY

There would be no significant or potentially significant impacts with respect to hydrology and water quality; therefore, no mitigation is required.

BIOTIC RESOURCES

Mitigation Measure 17: To avoid and minimize impacts to sensitive wetland habitats, the Project Sponsor shall complete a wetland delineation and habitat mapping survey for all shoreline areas proposed for construction as a result of the Project. This survey shall be submitted to the Agency and Planning Department (or City). These efforts would identify all sensitive habitats within a specific project area and allow for a quantitative evaluation of project impacts. Any activity that involves dredging or fill of a wetland area would be within the jurisdiction of several regulatory agencies and require permits and mitigation plans to satisfy these agencies (see Regulatory Framework discussion).

Additionally, the Project Sponsor shall complete the following items for each specific project:

- Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to ensure that there would be no impacts from stormwater runoff on fish or other aquatic species occurring in San Francisco Bay. The SWPPP shall be submitted to the Agency and City.
- Plan construction activities to avoid working directly in sensitive wetlands or mud flats when at all possible. For areas where avoidance is not possible, a permit(s), complete restoration, and cleanup of disrupted areas will be required.

Mitigation Measure 18: Specific projects shall avoid damage to, or removal of, street trees to the extent possible. Removal of street trees shall only occur after obtaining the appropriate permit from the DPW. Street trees removed or damaged by construction activities shall be replaced with plantings of the same tree species, or tree species designated or approved by the DPW.

Those trees to be retained shall not be damaged during construction. This shall be achieved by installing temporary fencing at the tree drip line during construction. There shall be no disturbance from construction activity, storage of materials, or worker parking within the drip lines of trees. Existing trees to be retained shall receive summer watering during construction. Continued summer irrigation of these trees shall be incorporated into the landscaping design for any individual project within the Project Area.

Mitigation Measure 19: Although this impact is considered less than significant, the following improvement measure is provided to facilitate compliance with state and federal laws relating to the protection of nesting birds.

The removal of trees, shrubs, or weedy vegetation should avoid the February 1 through August 31 bird nesting period to the extent possible. If no vegetation or tree removal is proposed during the nesting period, no surveys are required. If it is not feasible to avoid the nesting period, a survey for nesting birds should be conducted by a qualified wildlife biologist no earlier than 14 days prior to the removal of trees, shrubs, grassland vegetation, buildings, or other construction activity. Survey results shall be valid for 21 days following the survey. The area surveyed should include all construction areas as well as areas within 150 feet outside the boundaries of the areas to be cleared or as otherwise determined by the biologist.

In the event that an active nest is discovered in the areas to be cleared, or in other habitats within 150 feet of construction boundaries, clearing and construction should be postponed for at least two weeks or until a wildlife biologist has determined that the young have fledged (left the nest), the nest is vacated, and there is no evidence of second nesting attempts.

PUBLIC SERVICES AND UTILITIES

There would be no significant or potentially significant impacts with respect to public services and utilities; therefore, no mitigation measures are required.

ENERGY

There would be no significant or potentially significant impacts with respect to energy; therefore, no mitigation measures are required.

E. ALTERNATIVES

In formulating the project alternatives, this EIR uses the CEQA standard of analyzing alternatives that would lessen potentially significant project effects and whose effects can be reasonably ascertained. As previously discussed, implementation of the Project would result in significant and unavoidable impacts associated with urban design and visual quality (elimination of viewshed and increased lighting as a result of the Stadium Development Retail/Entertainment Center) and operation of the intersection of Third Street /Cesar Chavez Street.

This section evaluates two alternatives to the Project that would avoid or lessen the identified significant and unavoidable impacts. The No Project Alternative assumes that no

redevelopment plan or rezoning would be implemented in the Project Area. However, development would still occur under current zoning regulations. As few buildings are built to the current height limit, many structures could be renovated, and the Project Area could be redeveloped with mixed-use residential units. The Zoning Option B alternative, as proposed by the Eastern Neighborhoods Rezoning community planning process, assumes that a redevelopment plan would be implemented, but under a different zoning scheme. This alternative would allow for reduced housing development compared to the proposed full build-out analyzed for the Project. The alternatives analysis is provided in Chapter VI, Alternatives, of this document.

F. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Preparation of the EIR identified the following areas of controversy or unresolved issues regarding the Project.

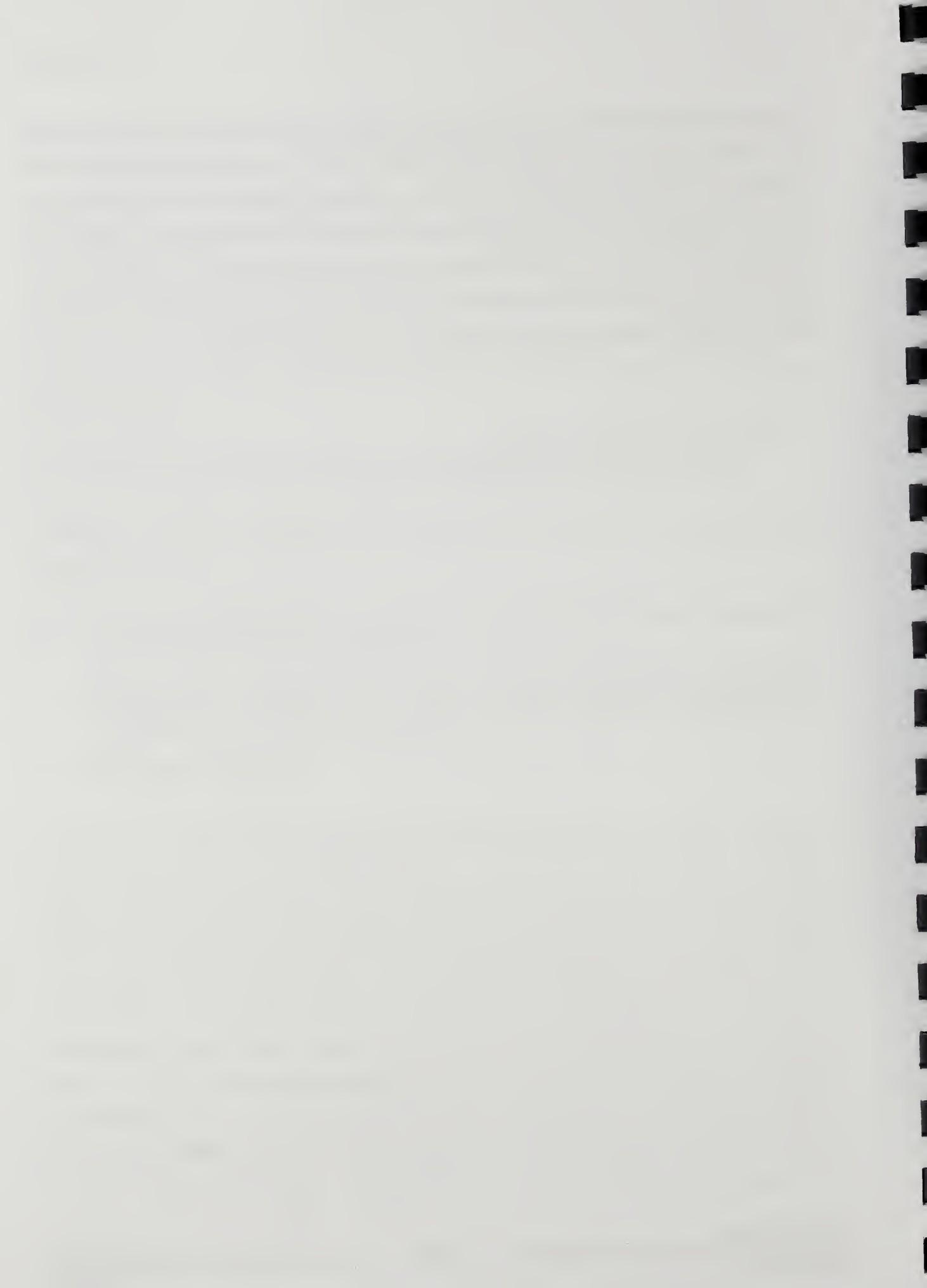
- Conserve existing housing and provide new housing, while retaining necessary PDR uses that support a diverse local economy
- Preserve and strengthen the fabric of the community, including the Town Center, neighborhoods, institutions, and resources, while eliminating displacement and relocation to the maximum extent possible

G. SCOPE OF THE EIR

This EIR is a Program EIR on the proposed Redevelopment Plans, as defined by California Environmental Quality Act (CEQA) Guidelines. As such, any future actions or projects falling within the range of programs or overall development analyzed in the EIR within the Project Area may require any further environmental review, unless there were project-specific or site-specific environmental impacts or other changed circumstances not identified in this Program EIR. The Project would be implemented primarily through the *San Francisco Planning Code*, as amended as a result of this Project. Thus, developments under the Project would be reviewed by the Planning Department under project authorization processes as stated in the *Planning Code*. In the course of such review, the Planning Department could determine that a specific project's impacts are fully encompassed in the Program EIR analysis, and that no further CEQA review would be necessary. In other cases, the Planning Department may

find that potential site-specific or project-specific impacts, such as shadow effects or localized transportation effects, would require further CEQA review. A Negative Declaration, EIR Addendum, or Supplemental EIR, as appropriate, would then be prepared to address specific effects or mitigation measures. Those subsequent CEQA documents would incorporate and use analyses and findings in this EIR (for example, cumulative analysis of transportation conditions, or standard mitigation measures). In this way, the Program EIR prepared for the Project would be expected to streamline CEQA review of future projects.

¹ San Francisco Planning Department, 2003.



I. INTRODUCTION

This Program Environmental Impact Report (EIR) assesses the potential environmental effects of construction and implementation of the Bayview Hunters Point Redevelopment Projects and Rezoning (the Project).

PURPOSE OF THE EIR

The San Francisco Redevelopment Agency (Agency) and the San Francisco Planning Department are the co-Lead Agencies preparing this EIR for the following purposes:

- To satisfy the requirements of CEQA
- To inform the general public, the local community, and responsible and interested public agencies, of the scope of the Project, its potential environmental effects, possible measures to mitigate those effects, and alternatives to the Project
- To enable the Agency to consider environmental consequences when deciding whether to adopt the Redevelopment Plan and/or approve project-specific elements of the Project
- To provide a basis for the preparation of subsequent environmental documentation for future development proposals
- To serve as a source document for responsible agencies to issue permits and approvals, as required, for development that occurs during the 30-year planning horizon

This EIR has been prepared in accordance with CEQA and the CEQA Guidelines. The determination that the Agency and the Planning Department are “co-lead agencies” is made in accordance with Sections 15051 and 15367 of the CEQA Guidelines, which define the lead agency as the public agency that has the principal responsibility for carrying out or approving a project.

EIR REVIEW PROCESS

On June 3, 2003, a Notice of Preparation (NOP) was filed for the Project, beginning a 30-day public review period. During the NOP review period, written comments were submitted by a variety of agencies, organizations, and individuals. Appendix A to this document provides the NOP.

This EIR is being circulated for review and comment to the public and other interested parties, agencies, and organizations for a 45-day period. A PDF version of the Draft EIR is available at www.sfgov.org/sfra. The comment period will begin on October 19, 2004, and end on December 3, 2004. A public hearing on the Draft EIR, where oral comments may be presented, will also be held at 5:00 PM or later on December 7, 2004, at

Room 400
City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Written comments on the EIR may be provided by be sent via U.S. mail and addressed to:

Jose Campos
Planning Division Manager
San Francisco Redevelopment Agency
770 Golden Gate Avenue
San Francisco, CA 94102

Following the public hearing and after the close of the written public comment period on the Draft EIR, responses to written and recorded comments will be prepared and published. The Final EIR, which will consist of the Draft EIR, comments on the Draft EIR, written responses to those comments, and the Mitigation Monitoring and Report Program (MMRP), will be considered for certification by the Agency and the San Francisco Board of Supervisors (Board), consistent with Section 15090 of the CEQA Guidelines. The Agency and the Board must consider the Final EIR prior to any decision to approve or reject the Project. If the EIR is certified and the Project is approved, written findings will be prepared for each significant adverse environmental effect identified in the Final EIR, as required by Section 15091 of the CEQA Guidelines. The MMRP must also be adopted to ensure compliance with mitigation measures that have been incorporated into the Project to reduce or avoid significant effects on the environment during Project construction and/or implementation.

Where feasible mitigations are not available to reduce significant environmental impacts to a less-than-significant level, impacts are considered significant and unavoidable. If the Agency and the Board approves a project that has significant and unavoidable impacts, the specific reasons for approving the project shall also be provided, based on the Final EIR and any other information in the public record. This is called a "Statement of Overriding Considerations" and is used to explain the specific reasons that the benefits of a proposed project make its unavoidable environmental effects acceptable. The Statement of Overriding Considerations is

adopted at the time the Final EIR is certified, and before action to approve the project has been taken.

INTENDED USES OF THE EIR

As previously discussed, this EIR will be used by the Agency and the Board to evaluate the environmental impacts of its decision with respect to approval or denial of the Project. In the event that the Project is approved, this EIR will be used to tier subsequent environmental analysis for future development within the Project Area, as allowed by Section 15152 of the CEQA Guidelines.

LIST OF ABBREVIATIONS

The following comprehensive list of abbreviations is provided to clarify references used throughout this EIR. In addition, a glossary is provided in Appendix E, providing definitions and/or further explanation of technical terms used in this document.

List of Abbreviations

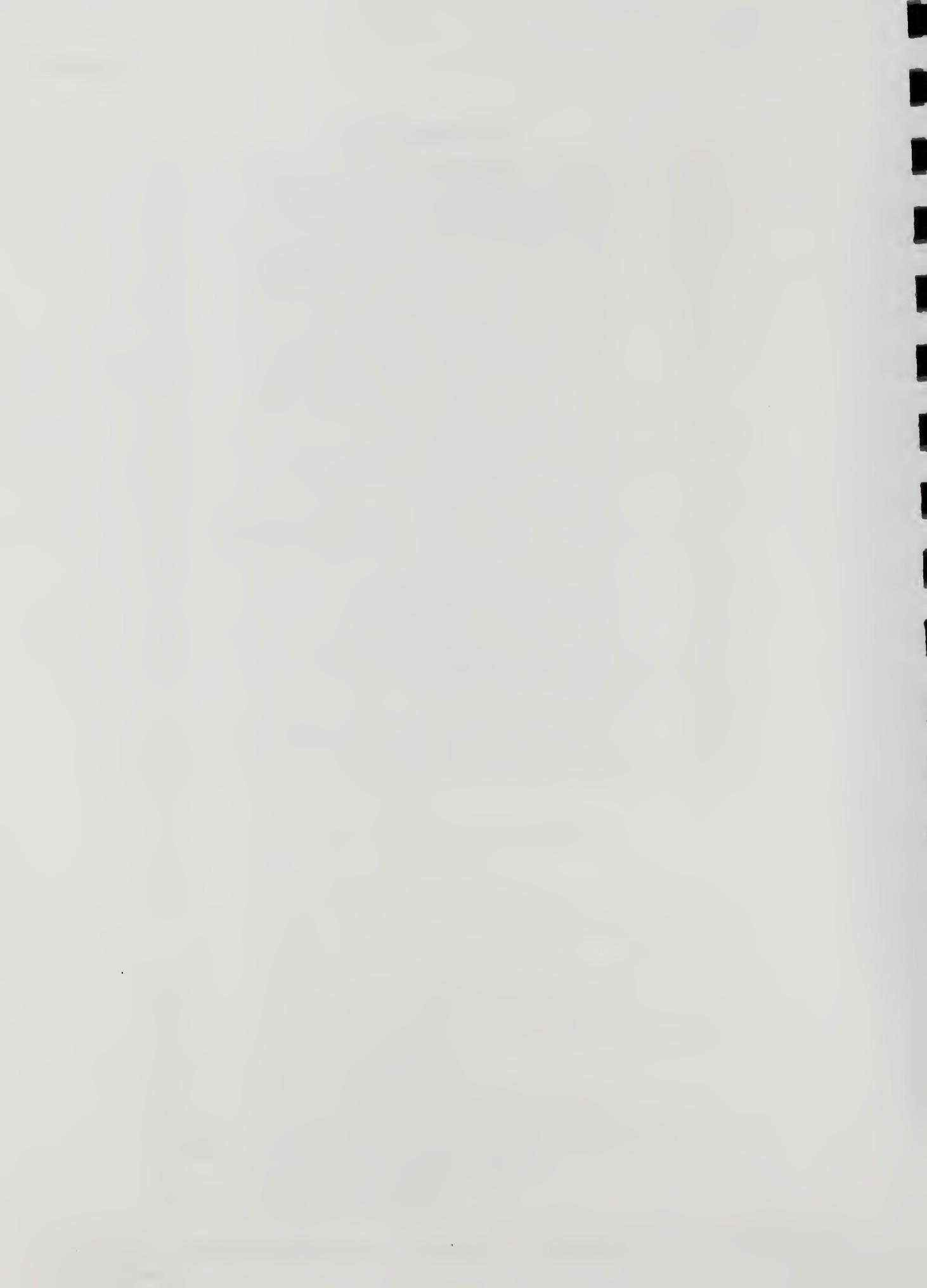
ABAG	Association of Bay Area Governments
AMSL	above mean sea level
AST	aboveground storage tank
ATCM	Asbestos Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
BCDC	San Francisco Bay Conservation and Development Commission
BIT	Bayview Industrial Triangle
BMPs	best management practices
BVHP	Bayview Hunters Point
CARB	California Air Resources Board
CCR	California Code of Regulations
CCSF	Community College of San Francisco
CDFG	California Department of Fish and Game
CDHS	California Department of Health Services
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIE	Cultural/Institutional/Educational land use
CLERRA	California Land Environmental Restoration and Reuse Act
CNDDB	California Natural Diversity Database
CNEL	Community noise equivalent level

List of Abbreviations

CNPS	California Native Plant Society
CPSRA	Candlestick Point State Recreation Area
CRHR	California Register of Historical Resources
CRHP	California Register of Historical Places
CSO	combined sewer outfall
CUP	conditional use permit
DBI	Department of Building Inspection
DHS	California Department of Health Services
DMMO	Dredged Material Management Office
DPW	Department of Public Works
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
HMBP	hazardous materials business plan
HP	Hunters Point
HUD	U.S. Department of Housing and Urban Development
IBIP	India Basin Industrial Park
IPZ	Industrial Protection Zone
JPB	Peninsula Corridor Joint Powers Board
LOS	Level of Service
LQG	large quantity generator
LRT	light rail transit; in reference to Third Street Light Rail Transit extension
LUST	leaking underground storage tank
MED	Medical and Health Services land use
MIPS	Management and Information Professional Services land use
MLP	maximum load points
MTC	Metropolitan Transportation Commission
MUHZ	Mixed Use Housing Zone
MUNI	San Francisco Municipal Railway
NEPA	National Environmental Protection Act
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries Service
NPDES	National Pollutant Discharge Elimination System
OHP	California Office of Historic Preservation
OSHA	California Occupational Safety and Health Administration
PAC	Project Area Committee
PCBs	polychlorinated biphenyls
PDR	Production, Distribution, Repair land use
PMSA	San Francisco Primary Metropolitan Statistical Area
RCRA	Resource Conservation and Recovery Act
RET	Retail and Entertainment land use
RMP	risk management plan

List of Abbreviations

ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SECF	Southeast Community Facility
SEWPCP	Southeast Water Pollution Control Plant
SFDPH	San Francisco Department of Public Health
SFFD	San Francisco Fire Department
SFHA	San Francisco Housing Authority
SFPD	San Francisco Police Department
SFPUC	San Francisco Public Utilities Commission
SFUSD	San Francisco Unified School District
SIP	State Implementation Plan
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SQG	small quantity generator
SWRCB	California State Water Resources Control Board
TAC	toxic air contaminants
TMDL	total maximum daily load
UMB	unreinforced masonry building
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
VISIT	Visitor Lodging land use
WLUP	Waterfront Land Use Plan
WSA	water supply assessment
WTP	water treatment plant



II. PROJECT DESCRIPTION

A. PROJECT OVERVIEW

The Agency proposes the Bayview Hunters Point Redevelopment Projects and Rezoning (the Project), which consists of the following elements:

- Adoption of the 1,575-acre Bayview Hunters Point (BVHP) Redevelopment Plan, which contains an amendment to the existing 137-acre Hunters Point (HP) Redevelopment Project Area to include an additional 1,438 acres. Redevelopment activity within the 1,575-acre amended BVHP Redevelopment Plan Area would be divided into seven activity nodes, including Northern Gateway, Town Center, Health Center, Oakinba, South Basin, Hunters Point Shoreline, and Candlestick Point. The land use districts, allowable uses, and development controls for the existing HP Redevelopment Project Area would not change; however, the *San Francisco Planning Code* would be applied to future development proposals in the Added Area as it exists at the time of a development application.
- Amendments to the existing 126-acre India Basin Industrial Park (IBIP) Redevelopment Plan and the existing 20-acre Bayview Industrial Triangle (BIT) Redevelopment Plan to: (1) revise the land use districts, allowable uses, and development controls of each plan to be consistent with the rezoning work of the Planning Department; and (2) allow housing and mixed-use development along the Third Street Light Rail Transit (LRT) corridor. The proposed BIT Redevelopment Plan Amendment would also institute tax increment financing as the means to fund Agency activities and programs in the Redevelopment Project Area.
- Adoption of the BVHP, IBIP, and BIT Redevelopment Plans which anticipates new development resulting in approximately 2.4 million square feet (sf) of net new floor area, including commercial, retail, industrial, and residential land uses, as well as approximately 5,523 net new employees, and an increase of approximately 3,700 net new dwelling units.
- Implementation of three major community redevelopment programs in the BVHP, IBIP, and BIT Redevelopment Plan Areas, which include an Economic Development Program, Affordable Housing Program, and a Community Enhancements Program.
- Rezoning in the Project Area consistent with “Rezoning Option C: High Housing Option” as reflected in the *Community Planning in the Eastern Neighborhoods, Rezoning Options Workbook (Workbook)*.¹

- Development of the Stadium Development Retail/Entertainment Center, consistent with Propositions D and F of the June 1997 San Francisco ballot.
- Development and construction of the Bayview Connections Urban Open Space Project.

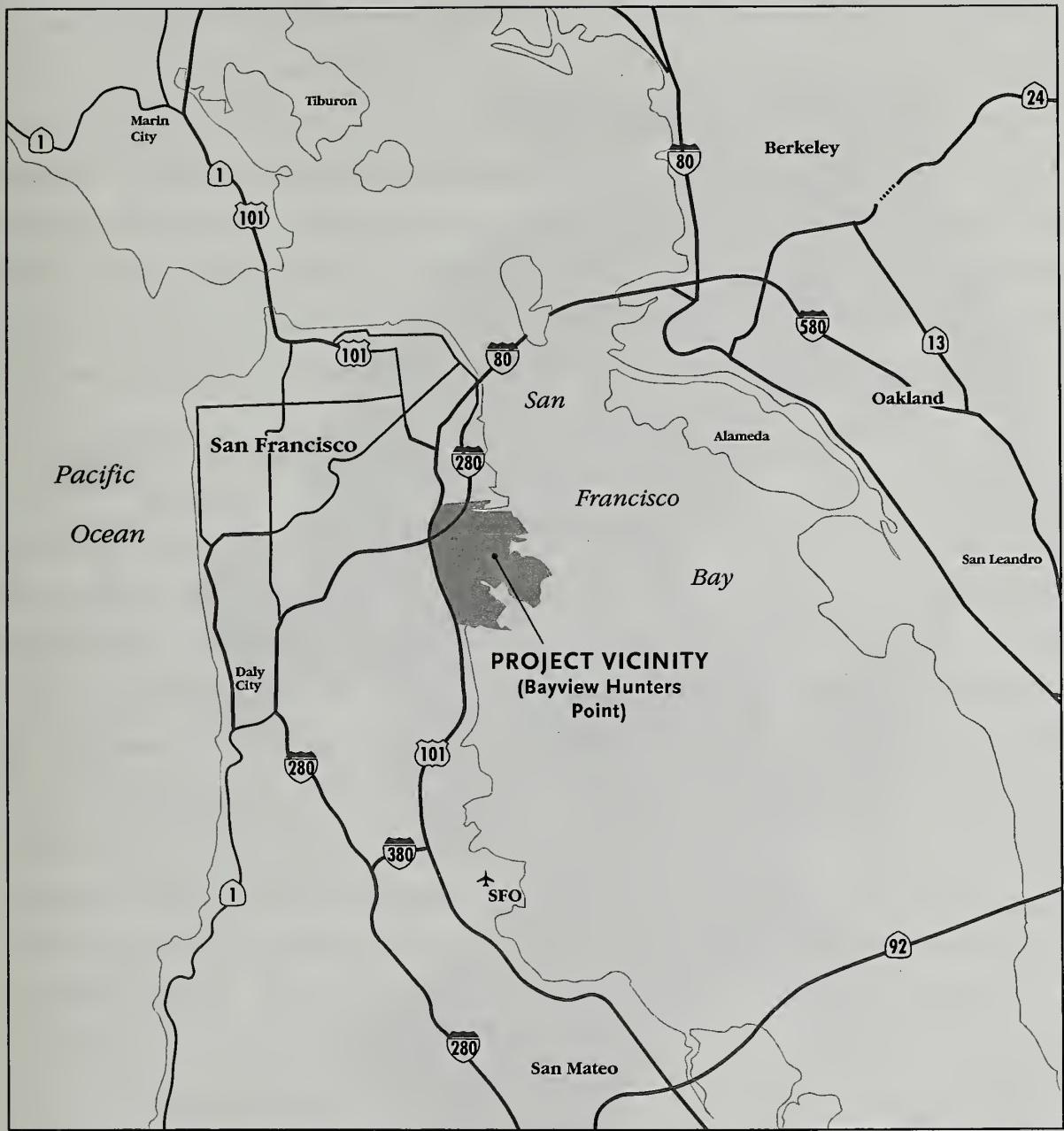
This EIR analyzes the physical changes that could occur within the Project Area, which includes the 1,575-acre BVHP Redevelopment Project Area, the 126-acre IBIP Redevelopment Project Area and the 20-acre BIT Project Area.²

The Agency and the Bayview Hunters Point Project Area Committee (PAC), working collaboratively with the Planning Department in its Eastern Community planning process, determined that “Rezoning Option C: High Housing Option” as described in the *Workbook*, created a development potential that is most similar to the overall amount of redevelopment supported by the policies and objectives of the Project. For this reason, this document considers Rezoning Option C as the Project for environmental review purposes. Land use and zoning controls associated with the Project would be considered as amendments to the *San Francisco Planning Code* by the Planning Commission and San Francisco Board of Supervisors at a later date. In addition, “Rezoning Option B: Moderate Housing Option” is evaluated in this EIR as an alternative to the Project. A brief description of the process by which the rezoning options were determined is presented in Section II.C, Project Area History and Demographics, of this document.

B. PROJECT LOCATION

The Project is located in the southeastern quadrant of the City and County of San Francisco in the vicinity referred to as Bayview Hunters Point (see Figure II-1). The Bayview Hunters Point area is generally bounded by Cesar Chavez Street to the north, US 101 to the west, San Mateo County to the south, and the San Francisco Bay to the east. The location of the Project Area within Bayview Hunters Point is illustrated by Figure II-2 (page II-4).

Regional access to the project vicinity is provided by US 101 via five interchanges with surface streets, and by I-280, which traverses the northwest portion of the Project Area and has one interchange at Cesar Chavez Street. Third Street is the main arterial street and

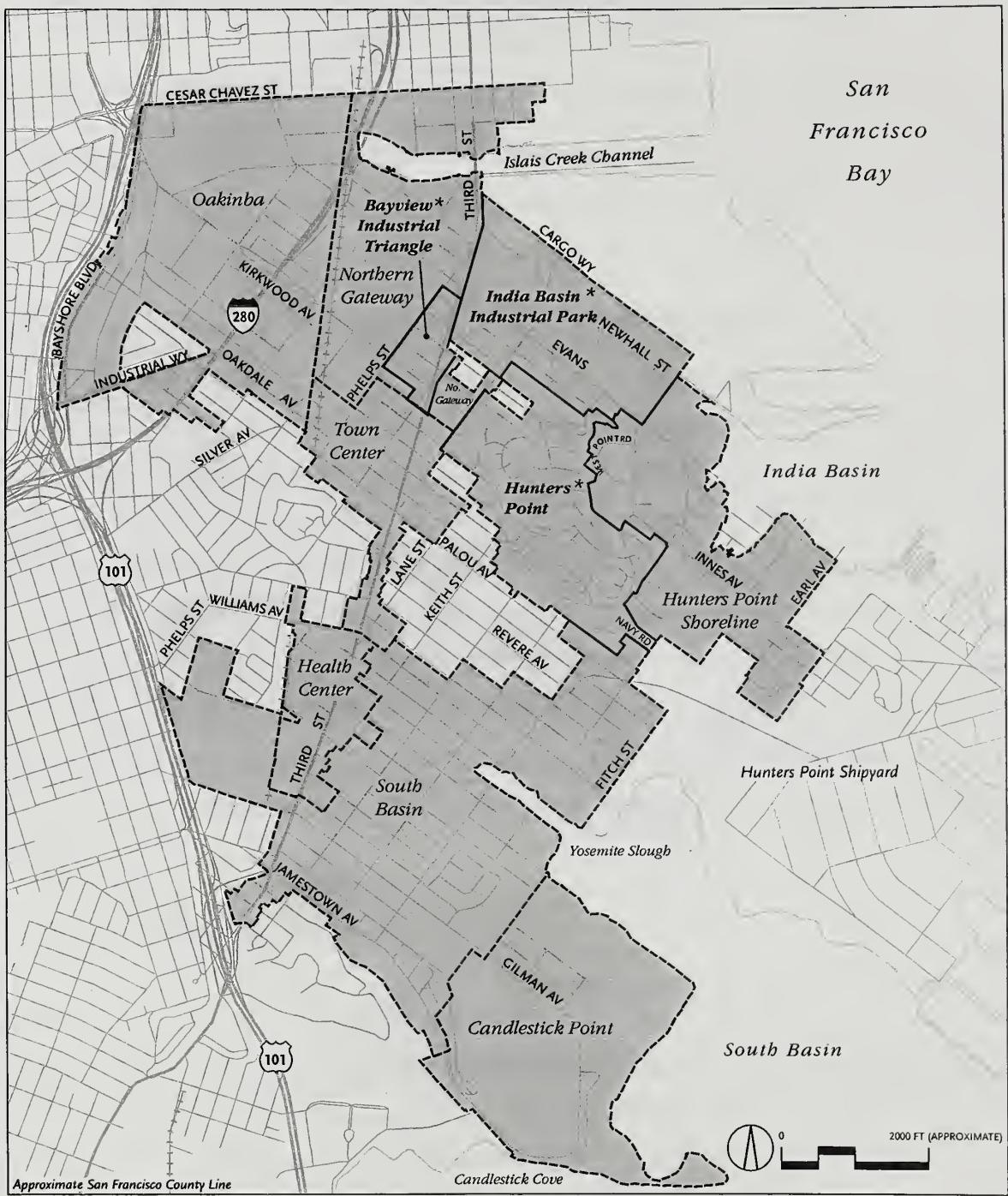


SOURCE: Clement Designs

10-12-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE II-1 PROJECT VICINITY



SOURCE: Clement Designs, San Francisco Planning Department

10-8-04



Redevelopment Project Areas and Activity Nodes

* Existing Redevelopment Project Areas (to be amended)



Rezoning Area

Bayview Hunters Point Redevelopment Plan EIR

FIGURE II-2 PROJECT AREA

traverses the entire length of the Bayview Hunters Point neighborhood. The proposed rezoning would apply to the Project Area, excluding the existing Hunters Point Redevelopment Area as the land use districts, allowable uses, and development controls would not change. Proposed rezoning within the IBIP and BIT Redevelopment Areas would be adopted as part of those plan amendments. Further, the proposed rezoning does not include other areas within Bayview Hunters Point, such as the Hunters Point Shipyard Redevelopment Area (the Shipyard), the San Francisco Port Authority lands north of Cargo Way, or the property south of Bayview Hill known as Executive Park (see Figure II-2).

C. PROJECT AREA HISTORY AND DEMOGRAPHICS

The area now called Bayview Hunters Point first drew Gold Rush settlers who were seeking lands to farm or were pursuing water-related livelihoods. By the 1850s, zoning rules relegated slaughterhouses, meatpacking plants, tanneries, fertilizer companies, and soap and tallow works to the southeast quadrant of the city. The location came to be known as Butchertown. The installation of the Shipyard by the U.S. Navy, and the accompanying port activities, turned Bayview Hunters Point into a regional industrial center. World War II-related production drew a work force of thousands. By the late 1960s and early 1970s, Shipyard operations declined with diminishing naval repair needs. Citywide, the heavy and light industrial uses were shrinking as businesses relocated plants and blue-collar employment to surrounding counties. When the number of jobs in Bayview Hunters Point decreased, so did its population, from a postwar peak of 50,000 persons in 1950 to 20,000 in 1970, which included a decrease in the African American population. Only recently has the decline in its population reversed, growing over 29 percent during the 1980s and over 11 percent during the 1990s. Today, Bayview Hunters Point has a population of about 34,000 persons.³ In addition to a diverse population, Bayview Hunters Point continues to be home to more than 500 heavy and light industrial uses, and retail and commercial establishments.

Recent downturns in economic cycles have affected the area residents disproportionately compared to other parts of the city, as unemployment rates in the area are more than twice citywide rates and incomes are far below citywide medians. Approximately 21 percent of

households in Bayview Hunters Point earn annual incomes below \$15,000.⁴ An estimated 34,000 persons are employed in Bayview Hunters Point, and about five percent of the 9,500 working residents are employed within the community. The great majority of residents work outside Bayview Hunters Point.⁵

Third Street is the principal surface street, connecting Bayview Hunters Point with the Central Waterfront and downtown San Francisco to the north, and to the Geneva Avenue/Daly City area to the south. The Third Street LRT project is currently being constructed to provide a transit link with other parts of the city and with the bay-wide transit network. The transit line will have 13 stations on Third Street between Cesar Chavez Street and the Caltrain Bayshore station near Bayshore Boulevard. Ten of these stations are within Bayview Hunters Point. The Third Street LRT project is scheduled to be completed in 2005.

EXISTING PLANS AND PLANNING PROCESSES

San Francisco General Plan

The South Bayshore Plan (as amended, July 1995) is an element of the *San Francisco General Plan* that covers the southeastern section of the City bounded by Cesar Chavez to the north, US 101 to the east, the Bay to the west, and the San Francisco county line to the south, exclusive of the Shipyard. The South Bayshore Plan lays the initial foundation for much of the housing, economic development, and community enhancement programs embodied in the Project. Since adoption of the South Bayshore Plan, there has been increased concern regarding the compatibility of industrial uses with other land uses, such as housing, as well as the types of industrial uses that should be located in Bayview Hunters Point. In addition, there has been an interest in applying current planning methodologies, particularly smart growth, where median density housing should be situated in mixed use buildings along transit corridors, thereby encouraging transit use, reducing dependence on automobiles for mobility, and reducing air quality degradation associated with automobile use. These issues have been articulated in the *Bayview Hunters Point Community Revitalization Concept Plan* and Eastern Neighborhoods Community Planning Process, which are both discussed in the following sections.

Redevelopment Plans

Over the past three decades, four redevelopment projects under the jurisdiction of the Agency have been established and are ongoing in parts of Bayview Hunters Point (see Figure II-2; Section III.A, Plans and Policies; and III.B, Land Use Compatibility and Policy Conformity):

- Hunters Point Redevelopment Project (adopted 1969, ongoing)
 - 137 acres of former wartime housing has been redeveloped into 1,530 affordable and 269 market-rate residential units, with improvements to seven school facilities and youth centers, 11 parks and open space plazas, and new streets with landscaping.
- India Basin Industrial Park Redevelopment Project (adopted 1969, ongoing)
 - 126 acres of industrial land has been revitalized with 11 industrial manufacturing projects, five retail projects, 10 warehouse/distribution projects, and three food production facilities.
- Bayview Industrial Triangle Redevelopment Project (adopted 1980, ongoing)
 - 20.3 acres of mostly industrial land, covering a five-block area west of Third Street between Fairfax and Kirkwood Avenues.
- Hunters Point Shipyard Redevelopment Project (adopted 1997, ongoing)
 - 936-acre former Naval Shipyard occupying Hunters Point, which contains 493 acres of dry land and 443 submerged acres, for which the developer group Lennar/BVHP Partners is preparing development plans.

Bayview Hunters Point Community Revitalization Concept Plan

In January 1995, the San Francisco Board of Supervisors designated over 2,530 acres of Bayview Hunters Point as a Redevelopment Survey Area. This action formally initiated the process for considering the feasibility of redevelopment activities to alleviate existing blight and deterioration, as requested by community leaders. In December 1996, the Planning Commission approved an Amended Preliminary Plan for the Hunters Point Redevelopment Project that included the original Survey Area; however, it also included the existing Hunters Point Redevelopment Project Area. In January 1997 pursuant to state law, a 21-member PAC was elected by Bayview Hunters Point to work with the Agency in planning the redevelopment of the area designated in the Amended Preliminary Plan. The Bayview Hunters Point PAC includes area homeowners, resident tenants, businesses, and community organizations. The

PAC also includes members representing the existing Hunters Point Redevelopment Project Area. An important outcome of the Agency's collaboration with the community through the PAC was the development of the *Concept Plan*.

The *Concept Plan* provides an overview of how concentrated revitalization actions, including redevelopment of the area can address the critical issues facing the community. The *Concept Plan* describes the economic, social, educational, and environmental needs of the community, proposes community objectives and policies, and articulates a community vision of future development. The PAC adopted the text of the *Concept Plan* in November 2000 and adopted a final iteration of the *Concept Plan* with pictures and color graphics in March 2002. The Agency and the PAC have discussed the need for future updates of the *Concept Plan* to address the needs of the community as redevelopment of the area occurs.

Eastern Neighborhoods Community Planning Process

In late 2001, the Planning Commission directed the Planning Department to initiate a community planning process in designated areas of the City. The purpose of the Eastern Neighborhoods community planning process, which includes Showplace Square, Potrero Hill, the Mission, South of Market, and Bayview Hunters Point, was to address the broad range of issues involved in formulating permanent controls for the City's last remaining industrially zoned lands and their surrounding residential and commercial neighborhoods. The process of formulating permanent controls began in 1999 when the San Francisco Planning Commission adopted "Interim Controls" to protect industrially zoned lands from economic competition from housing and office development pressures. Initially, the Planning Department did not include Bayview Hunters Point in its interim controls but the PAC successfully lobbied the Planning Commission to be included in the area protected by the interim controls.

In early 2002, the Planning Department initiated a series of public workshops in each neighborhood. Participation ranged from between 40 to 300 or more stakeholders at each neighborhood workshop. Through the year-long process of public workshops, participants grappled with how the area's industrially zoned land should be used in the future. They developed a core set of ideas that the Planning Department incorporated into the current

rezoning options. These public workshops were the main community component of the rezoning project.

In general, the public workshops in each neighborhood developed new zoning ideas and tools, and packaged them into three preliminary rezoning options: (1) Option A: Low Housing Option; (2) Option B: Moderate Housing Option; and (3) Option C: High Housing Option. These zoning options reflected the opportunities associated with a modest expansion of existing residential neighborhoods on industrial lands (Option A: Low Housing Option); development of selected new residential neighborhoods on industrial lands (Option B: Moderate Housing Option); and major residential development on industrial land (Option C: High Housing Option). The Agency and the PAC determined that of the three rezoning options presented in the Eastern Neighborhoods Community planning process, Option C created the most development potential of the zoning alternatives and was most consistent with the *Concept Plan*. Option B is evaluated in Section VI, Alternatives to the Project. Option A was determined to not provide the development opportunities envisioned by the community.

In particular, four main goals guided the Eastern Neighborhoods community planning process.

1. *Reflect Local Values.* To develop a rezoning proposal that reflects the land use needs and priorities of each neighborhoods' stakeholders and that meets citywide goals for residential and industrial land use.
2. *Increase Housing.* To identify appropriate locations for housing in the City's industrially zoned land to meet a citywide need for more housing, and affordable housing in particular.
3. *Maintain Some Industrial Land Supply.* To retain an adequate supply of industrial land to meet the current and future needs of the City's production, distribution, and repair businesses and the city's economy.
4. *Improve the Quality of All Existing Areas with Future Development.* To improve the quality of the residential and nonresidential places that future development will create over that which would occur under the existing M1 and M2 zoning.

D. PROJECT OBJECTIVES

The fundamental vision guiding the redevelopment process for Bayview Hunters Point is found in the *Concept Plan*, which states:

The Redevelopment Plans for Bayview Hunters Point shall enhance and strengthen existing activities in the area for the benefit of current residents and businesses, and not displace or replace them. Opportunities will be created for residents and businesses to participate in the revitalization and strengthening of the community's existing physical, social, and economic assets in a thoughtful and organized way. These goals will be achieved through incremental, ongoing small- and medium-scale redevelopment and renovation efforts and not through extensive land clearance followed by new construction.

To implement the vision of the *Concept Plan*, the Agency and the PAC have worked together to develop the following objectives, which are set forth in the *Redevelopment Plan for the Bayview Hunters Point Redevelopment Project*:

- Eliminating blight and correcting environmental deficiencies within the Project, including, but not limited to, abnormally high vacancies, abandoned, deteriorated and dilapidated buildings, incompatible land uses, depreciated or stagnant property values, and inadequate or deteriorated public improvements, facilities and utilities.
- Removing structurally substandard buildings, providing land for needed public facilities, removing impediments to land development, and facilitating modern, integrated development with improved pedestrian and vehicular circulation within the Project and vicinity.
- Redesigning and developing undeveloped and underdeveloped areas, which are improperly utilized.
- Providing flexibility in the development of real property within the Project to respond readily and appropriately to market conditions.
- Providing opportunities for participation by owners in the redevelopment of their properties.
- Increasing the community's supply of housing by facilitating economically feasible, affordable housing for existing very low-, low- and moderate-income households and residents in the community.
- Strengthening the economic base of the Project and the community by strengthening retail and other commercial functions within the Project through the facilitation of new retail space, and as appropriate, new commercial and light industrial uses.
- Retaining existing residents and existing cultural diversity to the extent feasible.
- Encouraging participation of area residents in the economic development that will occur.
- Supporting locally owned small businesses and local entrepreneurship.

- Facilitating emerging commercial-industrial sectors through facilitating improvement of transportation access to commercial and industrial areas, improvement of safety within the Plan Area, and the installation of needed site improvements to stimulate new commercial and industrial expansion, employment, and economic growth.
- Facilitating public transit opportunities to and within the Project to the extent feasible.
- Providing land, as feasible and appropriate, for publicly accessible open spaces.
- Achieving the objectives described above in the most expeditious manner feasible.

E. PROJECT CHARACTERISTICS

To implement the vision and objectives listed above, the Project includes plans, programs, and activities designed to stimulate land development and other improvements.

BVHP REDEVELOPMENT PLAN

The BVHP Redevelopment Plan would amend the existing Hunters Point Redevelopment Plan to include an additional 1,438 acres, providing an ultimate Redevelopment Project Area that would total 1,575 acres. The Hunters Point Redevelopment Plan would be renamed the BVHP Redevelopment Plan. In the existing Hunters Point Redevelopment Project Area, the redevelopment program would remain essentially unchanged. In the Added Area, the Project would initiate a 30-year program that would authorize the Agency to participate in certain programs and projects seeking to correct or alleviate documented physical and economic blighting conditions. It is proposed as an incremental, urban infill and rehabilitation program for private properties and public facilities within the BVHP Redevelopment Project Area. Redevelopment activities would be implemented in accordance with the BVHP Redevelopment Plan, and its adoption would allow the Agency to use redevelopment tools conferred on redevelopment project areas by California Community Redevelopment Law. Such tools include the ability to use tax increment financing to: (1) promote the development of affordable housing; (2) fund both public and private programs and projects that are intended to correct or alleviate blight through community and economic development; and (3) create community enhancements that improve the character and aesthetics of the BVHP Area. The BVHP Redevelopment Plan is designed to encourage and assist in the development of more

land-use intensive projects within the seven activity nodes, as well as the existing BIT and IBIP areas.

IBIP AND BIT REDEVELOPMENT PLANS

As part of the Project, concurrent redevelopment plan amendments for the 126-acre IBIP and the 20.3-acre BIT Redevelopment Project Areas would revise the land use districts, allowable uses, and development controls of each plan to be consistent with the rezoning work of the Planning Department (as determined during the Eastern Neighborhoods community planning process), and allow housing and mixed-use development along the Third Street LRT corridor. The proposed BIT Redevelopment Plan Amendment also institutes tax increment financing as the means to fund Agency programs and activities in the redevelopment project area.

ECONOMIC DEVELOPMENT PROGRAM

The Economic Development Program is designed to alleviate blight, directly and indirectly, thereby stimulating private sector investment and development in the area and job and entrepreneurial opportunities for local residents. Due to the large size and the diversity of Bayview Hunters Point, the Project would focus public investment within seven community-identified economic development activity nodes, as well as the IBIP and BIT redevelopment areas. A key to the Economic Development Program is the Third Street LRT project, now under construction, which is expected to create opportunities for new residential and commercial uses and compatible light industrial uses in mixed-use or other appropriate transit-oriented developments. New residential uses would expand and strengthen existing residential uses in the vicinity and enhance the viability of existing and new businesses. The seven economic development activity nodes include:

- **Northern Gateway Activity Node**, between Cesar Chavez Street and Jerrold Avenue and the Caltrain tracks and Third Street;
- **Town Center Activity Node**, between Jerrold Avenue and Williams - Van Dyke Avenue and Phelps and Lane Streets;
- **Health Center Activity Node**, between Williams - Van Dyke Avenue and Fitzgerald Avenue and Caltrain tracks and Keith Avenue;

- **Oakinba Activity Node**, between Cesar Chavez Street and Industrial Way – Oakdale Avenue and Bayshore Boulevard and Caltrain tracks;
- **South Basin Activity Node**, between Williams Avenue – Palou Avenue and Meade Avenue and US 101 and Fitch Street;
- **Hunters Point Shoreline Activity Node**, between Jennings Street and Navy Road and Donahue Street and Earl Street; and
- **Candlestick Point Activity Node**, between Fitch Street and Jamestown Avenue in the southeast corner of the Project Area.

Rezoning would also occur within the existing IBIP and BIT Redevelopment Project Areas, which are included in the Northern Gateway Activity Node as it primarily concerns potential development along Third Street within this activity node. As previously discussed, no rezoning is proposed for the existing Hunters Point Redevelopment Project Area.

1. Northern Gateway Activity Node, including IBIP and BIT Areas

Economic development in the Northern Gateway Activity Node, including the IBIP and BIT Redevelopment Project Areas, would focus on mixed-use projects along Third Street that would increase business and employment activities. New residential development would be encouraged in appropriate locations along Third Street to take advantage of the transit-oriented development opportunities presented by the new Third Street LRT. A mix of retail and service-oriented commercial uses would also be encouraged to increase activity and vitality on Third Street. Land beyond Third Street in the Northern Gateway Activity Node would retain most PDR⁶ activities and industrial land use controls, with residential, new heavy industry, and new office uses prohibited. Buffer zones would be established to provide a transition between industrial and mixed uses, and residential uses.

Zoning Controls

The land use controls immediately along Third Street would be changed to accommodate a mixture of uses, including commercial, light PDR, and housing. Buffer districts would be introduced to provide a transition zone between mixed-use residential and Core/PDR uses. Specifically, in the BIT Area, light PDR zoning

(buffer district) would be established between Fairfax and Jerrold Avenues, and between Phelps and Third Streets (excluding the Third Street frontage parcels). The industrially zoned areas would be converted to PDR zoning, which allows Core PDR land uses. In the IBIP Area, Core PDR uses between Newhall and Jennings Streets would be largely retained; however, zoning controls for properties along Third Street would now accommodate a mix of uses. Light PDR zones would be provided just west of Mendell Street to provide a transition between the mixed use districts and the industrial uses.

2. Town Center Activity Node

The Town Center Activity Node is identified as a commercial area with moderate scale mixed-use, transit-oriented development, primarily on Third Street between Jerrold Avenue and Williams/Van Dyke Avenues. The focus of this activity node is as a commercial district supported by new residential developments, with the largest opportunities for new housing in the Third Street parcels. Community civic uses would be anchored by the Town Center block, bounded by Third Street, Newcomb Avenue, Lane Street, and Oakdale Avenue. This block is entirely publicly owned and includes the Bayview Opera House, owned by the San Francisco Arts Commission; Joseph Lee Gym, owned by the Recreation and Park Department; and the former Burnett Elementary School, owned by the San Francisco Unified School District. This block represents the largest opportunity in the Project Area to provide new and consolidated civic uses, such as arts and culture, education, research, childcare, and other public/private partnerships, in a central location. For the blocks that neighbor the Town Center block, there would be opportunities to rejuvenate this core commercial area with restaurants, neighborhood stores, and other commercial businesses, and to add new housing units as the opportunity arises.

Zoning Controls

The zoning along Third Street is Neighborhood Commercial, with residential districts east and west of this zone. Public/Park zoning also exists on the Town Center Block.

There would be no major changes in zoning in the Town Center Activity Node. The area along Third Street would remain Neighborhood Commercial, allowing mixed-use development in the southern portion of Third Street in this activity node. However, some of the development controls in the new Neighborhood Commercial districts would be altered: allowable heights may be raised up to 55 feet along Third Street, and parking requirements may be reduced. New shared parking areas within the interior of the blocks on common easements would be encouraged. The Agency is also developing design standards to establish a uniform design treatment throughout the Town Center Activity Node that would encourage pedestrian activity and interactive first-floor facades.

3. Health Center Activity Node

While the Health Center Activity Node would support the development of a center for affordable senior residences in proximity to medical offices, clinics, and related medical services facilities, the medical and medical-related uses would be intended to serve the entire Bayview Hunters Point. The Southeast Health Center, which is owned by the Department of Public Health and is located directly adjacent to the Third Street LRT, may be expanded to provide additional private medical offices that support the services available through the health center. To provide a complete “Aging Campus” neighborhood for elderly persons, there would also be a focus on building new housing and encouraging new commercial/retail businesses within this activity node.

Zoning

The Health Center Activity Node is currently zoned for Public uses in Bayview Park and the Southeast Health Center, surrounded primarily by Light Industrial zoning. Areas along Third Street are zoned mixed-use under interim controls. The proposed rezoning would create a new Neighborhood Commercial district along Third Street that would allow for higher-density residential/commercial development. The surrounding areas would be converted to PDR Districts. A new mixed-use zone in proximity to the existing Southeast Health Center would allow medical offices and multi-family

residential uses with a buffer zone between industrial uses. Many small commercial services and retail uses would also be allowed in the PDR zone.

4. Oakinba Activity Node

The Oakinba Activity Node, generally bounded by Oakdale Avenue, Industrial Way and Bayshore Boulevard, would accommodate larger-scale, city-serving commercial businesses along with various sizes of PDR operations. This area is served by major arterials that connect Bayview Hunters Point to the rest of the city via Bayshore Boulevard, US 101, and I-280. This activity node would provide unique retail opportunities along Bayshore Boulevard between Industrial Way and Oakdale Avenue. Other areas within the Oakinba Activity Node, not adjacent to Bayshore Boulevard would enhance and augment existing PDR uses.

Zoning

The Oakinba Activity Node is suitable for Heavy and Light Industrial uses under the existing zoning. This zoning would convert to Core PDR zoning, while large-scale commercial services, retail uses, and Core PDR uses would be allowed in the newly-formed PDR/Large Commercial zone.

5. South Basin Activity Node

The South Basin Activity Node is the existing industrial area that extends from Bayshore Boulevard on the west to South Basin on the east, on either side of Yosemite Slough. The South Basin Activity Node would encourage transit-oriented, mixed-use development adjacent to Third Street to take advantage of the Third Street LRT. Land uses between Third Street and Bayshore Boulevard would transition from transit-oriented development to industrial uses. Industrial land use controls would be retained on Bayshore Boulevard and within the eastern portion of this area, with residential units and new office development prohibited. Where industrial uses intermix with residential uses, homes would be buffered from industry by adding small-scale neighborhood commercial services and light PDR uses, as the opportunity arises.

Zoning

The South Basin Activity Node contains predominantly Heavy Industrial zoning. Except for Third Street, this activity node would retain an industrial designation, which precludes residential and office development. The Industrial districts would be converted to PDR designations. Additionally, bands of Light PDR areas would be created between the existing industrial and residential areas. The new PDR designations would not allow new heavy industrial activities.

6. Hunters Point Shoreline Activity Node

The Hunters Point Shoreline Activity Node is located in the eastern portion of the Project Area. The San Francisco Housing Authority may build new housing on available infill development sites south of Hunters Point Boulevard and Innes Avenue and is seeking HOPE VI or other funds to renovate its Hunters View project. For the land lying northeast of Innes Avenue, the intent is to take advantage of the Hunters Point Shoreline Park that is currently being expanded by the San Francisco Recreation and Park Department, other City departments, and the Trust for Public Land. A Shoreline Park promenade, upon completion, would extend from Herons Head Park to the Hunters Point Shipyard.

Zoning

The Hunters Point Shoreline Activity Node is predominately zoned for Industrial uses north of the Evans-Hunters Point-Innes roadways and Residential or Neighborhood Commercial uses to the south. Public zoning is in place at Shoreline Park. Public and Park zoning would largely replace the Industrial zoning north of Evans-Hunters Point-Innes roadways. Overlay zoning or a special use district may be adopted to permit mixed uses in the industrial areas and would encourage bay- and community-oriented uses along the Evans-Hunters Point-Innes roadways.

7. Candlestick Point Activity Node

The Candlestick Point Activity Node accommodates the Stadium Development Retail/Entertainment Center. The Stadium Development Retail/Entertainment Center project was approved by San Francisco voters in June 1997. Proposition F amended the *General Plan*, *Planning Code*, and *Zoning Map* and established the Candlestick Point Special Use District to allow a stadium height of up to 200 feet and allow construction of other structures up to 150 feet under a conditional use approval for the mall. Proposition D calls for the issuance of \$100 million in bonds to help finance construction of the stadium. The objectives for the Candlestick Park Activity Node incorporate four elements of the Candlestick Point Special Use District:

- Provide a new San Francisco 49ers football stadium to accommodate approximately 75,000 spectators.
- Provide retail/entertainment mall adjacent to the stadium with approximately 1.2 million occupied square feet.
- Provide for transportation and circulation improvements, such as a new ring road and bridge along the perimeter of the stadium/mall site.
- Enhance Candlestick Point State Recreational Area.

Zoning

Candlestick Park and the Candlestick Point Recreational Area are primarily zoned for public uses, with a small area zoned for Heavy Industrial. While this zoning would remain, except for the conversion of Heavy Industrial zoning to Core PDR zoning, the project approved by San Francisco voters in 1997 amended the *General Plan* and *Zoning Map* to allow the uses and height limits noted above for the Stadium and the mall.

AFFORDABLE HOUSING PROGRAM

The Project would include an Affordable Housing Program for the production of affordable housing on infill and other opportunity sites in Bayview Hunters Point. Specific actions to be implemented under the Affordable Housing Program would be catalogued in a Framework

Housing Program document that would be adopted by the Redevelopment Agency Commission and would be consistent with the Housing Element of the *General Plan* and the *Citywide Consolidated Housing Plan*, maintained by the Mayor's Office of Housing and the Agency. The Framework Housing Program document would be updated from time to time to be continually consistent with the Housing Element and Consolidated Housing Plan. The Affordable Housing Program would encompass a range of housing types, both rental and ownership, and include multi-bedroom family housing and one-bedroom dwellings. Moreover, an affordability target would be set at the median area income in Bayview Hunters Point, which is lower than the citywide median income.

To maintain the stability of the neighborhoods and the desired balance of homeowners and renters, the Affordable Housing Program would include housing development activities within the activity nodes. Existing homeowner and renter assistance programs administered by the Agency and the Mayor's Office of Housing would be carried forward in the Project Area. The Agency would also establish a Model Block Program to address repair and improvement of single-family homes on a block-by-block basis in the community.

In addition to the efforts of the Agency and the Mayor's Office of Housing, five San Francisco Housing Authority developments exist within the boundary of the Project Area. The Housing Authority is working to rehabilitate its existing developments and will seek federal HOPE VI and other funding.

COMMUNITY ENHANCEMENT PROGRAM

The Project would establish a Community Enhancement Program to improve and enhance the community character by establishing design guidelines and streetscape plans, and funding these public improvement and enhancement activities. The Design Guidelines would guide the design and appearance of new construction, particularly mixed-use transit-oriented development along Third Street. Separate design guidelines would also be created for the Evans Avenue to Innes Avenue corridor through the Hunter's Point Shoreline Activity Node and for the Oakinba Activity Node.

Streetscape Plans would be initiated for the three major roadways in the community, including: (1) Third Street; (2) the northern route to the Shipyard, along Evans and Innes Avenues; and (3) a new southern route into the Shipyard along Carroll Avenue and a proposed connection across Yosemite Slough. The Streetscape Plans would include landscaping, street furniture, lighting, pedestrian islands, and other uniform features, and could also add parking on side streets to alleviate the parking loss related to the Third Street LRT project. A Green Streets Program would augment the Streetscape Plans by adding landscaping and lighting to local neighborhood streets. The Green Streets Program would establish a coordinated system of landscaped streets with enhanced pedestrian facilities that connect open space resources to each other, to transit links, and to the waterfront. A partial list of initial “Green Streets” could include Palou Avenue, Cargo Way, Donahue Street, Hudson Avenue, and Innes Avenue. Other roadways could be added to the Green Streets Program in concert with the Model Block Program.

A Façade Renewal Program would maintain and enhance existing storefront facades along the major roadways, and a Framework Open Space Program would guide the improvement, maintenance, and programming of publicly owned open space in the area, in concert with the Recreation and Park Department and other local and state agencies with jurisdiction over open space resources in the Bayview Hunters Point area. The Framework Open Space Program would provide a mechanism to manage the long-term maintenance, enhancement, and development of the community’s open space and recreation system and would guide existing and new open spaces in the community, as well as potential open space resources at the Shipyard, on Port-owned land north of Cargo Way, and on state-owned lands around Yosemite Slough.

An Enhanced Truck Route Program⁷ would designate and enhance truck routes between industrial and commercial locations and the US 101 and I-280 freeways. The Agency would work with the San Francisco Department of Public Works to plan and implement these truck routes. In the Northern Industrial area, Cesar Chavez Street, Cargo Way, Evans Avenue, and Jerrold Avenue would be the principal truck routes. A new rail/truck bridge would connect Illinois Street north of Islais Creek with the Port-owned lands south of the creek to avoid truck

travel on Third Street that would conflict with the new Third Street LRT, automobiles, and mixed-use development. A new connection between the industrial areas of South Basin and the Hunters Point Shipyard and US 101 would be created using either a new bridge across Yosemite Slough or South Basin (along Fitch Street, Griffith Street, or another alignment), or an alternative route. The truck routes would be physically improved to accommodate trucks, landscaped as truck “parkways,” and clearly signed. Trucks would be prohibited or restricted from using non-truck route roadways.

While this EIR provides general analysis of the Enhanced Truck Route Program, and the San Francisco 49ers Stadium Development Retail/Entertainment Center, further environmental study is anticipated for these projects as well as the new bridge projects.

REZONING IN THE PROJECT AREA

A key element of the Project analyzed in this document is the rezoning proposal. The *San Francisco Planning Code* governs development within the Project Area, and *Planning Code* zoning regulations, as applied to the Project Area’s existing zoning designations, would control land development in the Project Area. However, a separate rezoning effort for Bayview Hunters Point began as part of the Eastern Neighborhood community planning process, which produced three rezoning options. The Agency and the PAC determined that of the three rezoning options presented in the Eastern Neighborhoods Community planning process, Option C created the most development potential of the zoning alternatives and was consistent with the *Concept Plan*.

The proposed changes in land use controls would be compatible with and would help implement the Project. Thus, this document considers the Rezoning Option C as the Project, while Option B is evaluated in Section VI, Alternatives to the Project. Option A was determined to not provide the development opportunities envisioned by the community.

Recognizing that Bayview Hunters Point is characterized by both well-established residential neighborhoods and major industrial districts, one of the primary objectives of the rezoning effort has been to reduce conflicts where industrial uses and residences come into close

proximity. Another major goal of the rezoning effort is to support the economic revitalization of the Third Street corridor, which represents the historical and cultural heart of the community. An improved and dynamic Third Street is at the core of the community's vision for Bayview Hunters Point.

The proposed rezoning would support a significant level of new development throughout the Project Area; it would establish moderate and transit-oriented mixed use districts for close to the entire length of Third Street in the Project Area. This zoning approach would encourage moderate commercial activities at the ground level with residential above. Increased height limits and densities would accompany the new zoning to create opportunities for new housing along the new Third Street LRT line. Land not adjacent to Third Street would adopt land use designations that are similar to those currently in place.

A major component of the rezoning in this activity node is the replacement of the M-1 and M-2 zones with the new PDR districts. These new controls are based on a refined definition of industrial activities and identify a set of activities that are compatible with housing and those that require separation from other uses. Responding to a number of environmental justice concerns in the area, many of the heaviest industrial activities will no longer be allowed on land under city jurisdiction in Bayview Hunters Point.

To ensure economically stable and healthy neighborhood commercial activity, the Agency and PAC have developed distinct economic development activity nodes. The preferred uses in the Northern Gateway, Town Center, Health Center and South Basin Activity Nodes call for the development of distinctly different neighborhood commercial activities in each node that would complement rather than compete with each other and that, together, meet most of the neighborhood commercial needs of Bayview Hunters Point.

NET NEW DEVELOPMENT

Based on changes in zoning proposed in the activity nodes, the expected availability of development sites, and the implementation of Project activities over time, the total net new floor area anticipated within the Project Area would be approximately 2.4 million square feet

by 2025, as shown in Table II-1. The potential retail mall at Candlestick Park would represent approximately half of this new floor area. The remaining floor area would be spread throughout the activity nodes, with the Hunters Point Shoreline Activity Node containing the greatest percentage of the remaining net new square footage. New uses would be projected to result in approximately 5,523 net new employees who would work in the Project Area, about half of whom would be employed at the potential Stadium Development Retail/Entertainment Center, with the remaining half spread throughout the other activity nodes. Implementation of the BVHP Redevelopment Plan would result in an increase of approximately 3,700 new dwelling units by 2025.

As shown in Table II-2, about three-quarters of the net new dwelling units would be multi-family units ranging from studios to four bedrooms. The remaining new dwelling units would be three- to four-bedroom, single-family residences. The largest percentage (29 percent) of net new dwelling units would be owner-occupied, multi-family dwelling units with an average of two bedrooms, followed by multi-family rental studio and one-bedroom apartments (27 percent).

BAYVIEW CONNECTIONS URBAN OPEN SPACE PROJECT

The San Francisco Municipal Railway (MUNI) and the Department of Public Works are developing the Bayview Connections Urban Open Space Project, which is an ongoing project in the Project Area. The Bayview Connections Urban Open Space Project would be a pedestrian and streetscape improvement project that would improve the linkages between

TABLE II-1
ALLOCATION OF NET NEW FLOOR AREA AND
EMPLOYMENT BY ACTIVITY NODE AND LAND USE TYPE (2025)

Activity Node										Northern Gateway ¹			Town Center			Health Center			Oakinba			South Basin			Hunter's Point Shoreline			Candlestick Point			TOTAL		
Land Use	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)	(sf)	(emp.)													
	CIE	10,000	25	35,000	89	20,000	51	0	0	0	0	0	50,000	127	0	0	0	0	0	0	0	0	115,000	292									
MED	0	0	0	0	50,000	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,000	127									
MIPS	40,000	110	40,000	110	10,000	0/0	28	30,000	83	100,000	275	0	0	0	0	0	0	0	0	0	0	220,000	606										
PDR	75,000	155	0	0	0	0	100,000	207	100,000	207	150,000	310	0	0	0	0	0	0	0	0	0	425,000	879										
RET	21,850	50	100,000	227	50,000	131	100,000	227	40,000	91	80,000	181	1,200,000	2,721	1,591,850	3,610																	
VISIT	0	0	5,000	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,000	11										
TOTAL	146,850	340	180,000	437	130,000	319	200,000	434	170,000	381	380,000	893	1,200,000	2,721	2,406,850	5,523																	
Dwelling Units													600	700	700	0	0	0	0	0	0	3,700											

Source: San Francisco Redevelopment Agency, 2004.

Notes:

sf/emp = total square feet/total employees

CIE = Cultural/Institutional/Educational (274 sf per job)

MED = Medical and Health Services (259 sf per job)

MIPS = Management and Information Professional Services 275 sf per job)

PDR = Production, Distribution, Repair (437 sf per job)

RET = Retail and Entertainment (367 sf per job)

VISIT = Visitor Lodging (394 sf per job)

- The Northern Gateway Activity Node includes the net new floor area and employment associated with the BIT and IBIP Redevelopment Project Areas.

TABLE II-2
NET NEW DWELLING UNITS BY TYPE AND ACTIVITY NODE

Dwelling Units	Northern Gateway ¹	Town Center	Health Center	South Basin	Hunters Point Shoreline	TOTAL/%
Multi-family Owner-occupied, (1-3 bedrooms)	250	150	250	175	250	1,075/29%
Multi-family Rentals (Studio/1 bedrooms)	100	175	550	75	100	1,000/27%
Single-family and Townhouse Ownership (3-4 bedrooms)	250	0	150	275	250	925/25%
Multi-family Rentals (2-4 bedrooms)	150	125	250	75	100	700/19%
Total D/U	750	450	1,200	600	700	3,700/100%

Source: San Francisco Redevelopment Agency, 2004.

Notes:

1. The Northern Gateway Activity Node includes the residential units associated with the BIT and IBIP Redevelopment Project Areas.

transit, retail, neighborhood services, and cultural facilities in the center of Bayview Hunters Point. The Bayview Connections Urban Open Space Project is included in this document because it has been funded by the Agency and there is a sufficient degree of information available to adequately evaluate its environmental impacts.

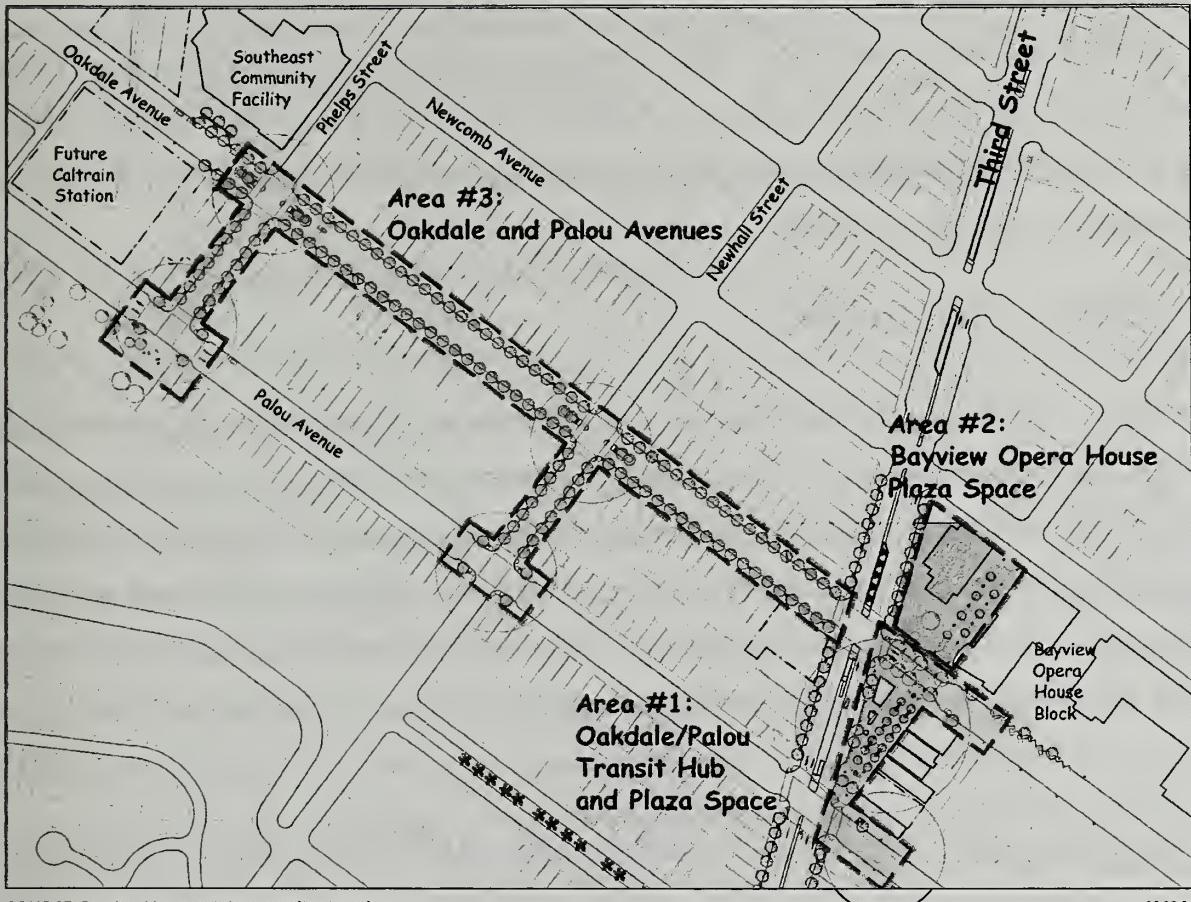
The Bayview Connections Urban Open Space Project would include two major phases. The first phase would add to Bayview Hunters Point's formal public open space by reclaiming the existing Mendell Street public right-of-way between Oakdale and Palou Avenues as a pedestrian-only space. Phase 1 is anticipated to begin in the Fall of 2004. In addition, streetscape improvements along Oakdale Avenue and improvements to the Palou Avenue bus stops would be constructed in the first phase.

In Phase 1, Mendell Street would be permanently closed to automobiles, creating a "walking street" that would connect major transit stops with retail/food businesses and nearby childcare, cultural, and recreational facilities. The spaces would contain attractive paving, pedestrian

lighting, benches, trees, and landscaping. These amenities would be compatible with the planned urban design for the Third Street LRT for the Bayview Hunters Point's commercial core. Crosswalks would be restriped at all intersections, including a mid-block crosswalk across Oakdale Avenue that would connect the Bayview Opera House Plaza with the Oakdale transit hub, as this area would remain open to traffic. Daily transit users would be able to wait in one area for five transit lines. Existing retail space at the Transit Hub site would be retained. An information center/kiosk would provide a community bulletin board, and a merchants directory.

Phase 1 would also include streetscape improvements for the pedestrian route along Oakdale Avenue between Third Street and Phelps Street, connecting the Third Street LRT station and four Muni bus lines to the Southeast Community Facility. New streetscape improvements along Oakdale Avenue would include pedestrian lighting, street trees, and a striped bike lane. Center median elements would be constructed on Oakdale Avenue at the intersections of Newhall and Phelps Streets to add visual interest and to create a refuge for those crossing the street. Streetscape improvements would also extend west from Oakdale Avenue to Palou Avenue bus stops along Newhall and Phelps Streets. At bus stops on Palou Avenue, improved pedestrian lighting, sidewalk bulb-outs, infill trees, and bus shelters would better define bus stop areas, especially the combined Palou/Phelps Mini-park and bus stop.

Phase 2 would enhance the activities of the cultural and recreational institutions on the Town Center block by creating opportunities for an outdoor performance space, gardens and other landscaping, and public art projects as well as programmed outdoor cultural events. The second phase would involve the redesign and renovation of existing Bayview Opera House plaza spaces (see Figure II-3). Phase 2 is still in the design phases and is being considered for reconfiguration as part of the Town Center Activity Node.



SOURCE: Bayview Hunters Point Revitalization Plan

10-12-04

— Areas ● Improved Transit Stops [] Opportunity Sites

In addition to the Urban Open Space Project activities, the San Francisco County Transportation Authority and Caltrain are currently studying the feasibility of constructing a new Caltrain Station on Oakdale Avenue (to replace the Paul Avenue station) in the vicinity of the Southeast Community Facility.

F. PROJECT FINANCING

The Project would authorize the Agency to collaborate with City departments in financing public improvements within the Project Area. It would also enable the Agency to pursue public/private and public/nonprofit partnerships to help implement the Project. The Project would authorize the Agency to use the tools of tax increment financing and/or land acquisition in the pursuit of development or rehabilitation projects/programs that are consistent with the BVHP Redevelopment Plan. When private or nonprofit entities or individuals partner with the Agency for financial or any other type of assistance, the partnership would most often be governed by Owner Participation Agreements, Disposition and Development Agreements, or some other type of agreement in which the Agency may leverage public financing to meet the goals of the BVHP Redevelopment Plan.

The Project would authorize the Agency to finance redevelopment activities with the following sources:

- Tax increment funds
- Interest income
- Agency bonds
- Loans from private financial institutions
- Lease or sale of Agency-owned property
- Agency participation in development
- Sales tax advanced or paid to the Agency in accordance with applicable provisions of law

The City or any other public agency may expend money to assist the Agency in carrying out the proposed Plan Amendments. Tax increment financing as authorized by the Plan

Amendments would be a source of financing in combination with other sources of financing that may be available for specific project activities.

G. EIR AND PLAN AMENDMENTS ADOPTION PROCESS

ROLE OF ENVIRONMENTAL IMPACT REPORT

Following publication of the Draft EIR, there will be a 45-day written comment period and a public hearing to solicit public comment on the adequacy and accuracy of the Draft EIR. Following the comment period, responses to written and oral comments will be prepared and published in a Draft Summary of Comments and Responses document. The EIR will be revised, as appropriate, and the Final EIR will be presented to the Agency Commission and the Planning Commission for certification as to its accuracy, objectivity, and completeness. No approvals or permits for implementation of the Project may be issued before the EIR is certified.

PURPOSE OF A PROGRAM EIR REGARDING A PROPOSED REDEVELOPMENT PLAN

Plan Amendments Adoption

Following certification of the EIR, the Plan Amendments will be considered by the Agency and by the Board of Supervisors. Adoption of the Plan Amendments would enable the Agency to: (1) use redevelopment funds or financing mechanisms to remedy the blight that now characterizes the Project Area; and (2) establish land use standards to allow and control development of the Project Area.

Projects that are funded by the Agency within the Project Area may require Owner Participation Agreements or Disposition and Development Agreements between the Agency and the individual developers of projects. The Owner Participation or Disposition and Development Agreement would allow and govern the physical construction of each project and establish and govern the relationships between the Agency and the developer regarding

acquisition, ownership, assembly of a project site, and financing, construction, ownership, and operation of project improvements.

Adoption of the Project would require that some components of the *San Francisco General Plan* be amended to ensure consistency; however, the *General Plan* contains a number of elements with objectives, policies, and principles that are relevant to the Project that would not require any changes.

REQUIRED APPROVALS

The following specific actions and approvals are proposed to implement the Project:

Agency Commission and Planning Commission

- Jointly certify the Final EIR.
- Adopt CEQA findings and mitigation monitoring program.

Agency Commission

- Approves adoption of the Plan Amendments.
- Approves Report to Board of Supervisors on the Plan Amendments.

Planning Commission

- Adopts, and recommends to the Board of Supervisors, General Plan amendments, including amendments to the South Bayshore Plan of the General Plan, as necessary.
- Approves and recommends to the Board of Supervisors, amendments of the Planning Code and Zoning Map, as necessary.
- Determines consistency of the Plan Amendments with the General Plan and Planning Code Section 101.1 Priority Policies, and recommends adoption to the Board of Supervisors.

Board of Supervisors

- Adopts CEQA findings and mitigation monitoring program.
- Adopts General Plan amendments, including amendments of the South Bayshore Plan of the General Plan, as necessary.
- Approves adoption of the Plan Amendments.

- Adopts amendments of the Planning Code and Zoning Map, as necessary.
- May approve amendment to the budget of the Agency for tax allocation bonds.
- May authorize Cooperation Agreements with the Agency to promote the goals of the Plan Amendments.

Projects implemented under the Project would also be subject to normal permitting procedures including building and fire safety permits from the Central Permit Bureau of the Department of Building Inspection and any applicable permits from the Planning Department. Other permits may also be required on a project-specific basis.

H. ACTIONS FOR RELATED PROJECTS

EASTERN NEIGHBORHOODS COMMUNITY PLANNING PROCESS

The proposed rezoning of the Bayview Hunters Point area is part of a larger citywide policy discussion. This EIR analyzes the potential growth impacts of implementing the land use controls identified as Rezoning Option C of the Planning Department's Eastern Neighborhood's community planning process. The alternatives analysis also considers the impacts of establishing Rezoning Option B as the basis for rezoning. It is possible that the final rezoning proposal would fall within the growth projections of both of these zoning options and, thus, this EIR essentially brackets the range of these two zoning possibilities. The changes to the *Planning Code* for other areas of the City outside the Project Area under consideration for rezoning as part of the Eastern Neighborhood community planning process would be analyzed in a separate CEQA document.

The Planning Department is continuing its technical analysis to develop land use controls associated with each zoning district. The Planning Department is also working with the community and the Agency to develop a final *Zoning Map*. Finally, the proposed language for the *Planning Code* would be drafted, which may require some additional CEQA analysis. Once the specific rezoning option gains CEQA clearance, changes to the *Planning Code* would be considered by the Planning Commission and the Board of Supervisors.

NOTES – *Project Description*

- ¹ San Francisco Planning Department, 2003.
- ² This EIR evaluates redevelopment activities within the Project Area on a programmatic basis. While specific projects are discussed in this document, such as the Illinois Street bridge, Yosemite Slough bridge, the San Francisco 49ers Stadium Development Retail/Entertainment Center, the Enhanced Truck Route Program, and the San Francisco Housing Authority Hope VI project, additional environmental review is either ongoing or will need to be completed in order to fully evaluate and approve these specific projects.
- ³ Bayview Hunters Point Project Area Committee. *Bayview Hunters Point Revitalization Concept Plan*, 2002, p. 28.
- ⁴ Bayview Hunters Point Project Area Committee. *Bayview Hunters Point Revitalization Concept Plan*, 2002, p. 36.
- ⁵ Bayview Hunters Point Project Area Committee. *Bayview Hunters Point Revitalization Concept Plan*, 2002, p. 35-37.
- ⁶ Production, Distribution and Repair is a new land use category that is proposed to replace M-1 and M-2 industrial zoning. PDR accounts for the varying levels of use and noxious properties (e.g., odors) that accompany some industrial use.
- ⁷ The Enhanced Truck Route Program is one component of the larger Bayview Transportation Improvement Project, which is currently being developed by the City and County of San Francisco to reduce the impacts of truck traffic in the Bayview Hunters Point area. The planning process is currently underway and will be completed over the next two years.

III. ENVIRONMENTAL SETTING AND IMPACTS

Sections III.A through III.Q of this EIR contain a discussion of the potential environmental effects of implementation of the Project, including information related to existing site conditions, analyses of the type and magnitude of project-related and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. Project-related environmental impacts are presented as “Program Effects” and “Project Effects.” Program Effects are the environmental impacts that could result from amendment and adoption of the redevelopment plans; implementation of the three major community redevelopment programs, including the Economic Development Program, the Affordable Housing Program, and the Community Enhancements Program; and rezoning in the Project Area consistent with “Rezoning Option C: High Housing Option” as reflected in the *Community Planning in the Eastern Neighborhoods, Rezoning Options Workbook (Workbook)*. “Project Effects” are the environmental impacts that could result from development and construction of the Bayview Connections Urban Open Space Project. Where potentially significant impacts are identified, they are numbered to correspond with the mitigation measures that are identified in Section IV of this document.

When appropriate, impacts are divided into program and project impacts. Program impacts relate to: (1) the Economic Development Program (primarily the land development program, separated into the seven activity nodes, as well as the BIT and IBIP Redevelopment Plan areas); (2) the Affordable Housing Program (including the Framework Housing Program and Model Block Program); (3) the Community Enhancements Program (including the Design Guidelines, the Streetscape Plans, the Green Streets Program, the Framework Open Space Program, the Enhanced Truck Route Program, and the Façade Renewal Program); and (4) rezoning Project impacts related to the Bayview Connections Urban Open Space Project. While the impact discussion generally focuses on the Economic Development Program, impacts of these other programs are identified, if applicable. Further, the impact discussion is

presented by areawide impacts, and by impacts that would occur within each activity node if applicable.

SCOPE OF THE ENVIRONMENTAL IMPACT ANALYSIS

Under CEQA Guidelines Section 15180, “All public and private activities or undertakings pursuant to or in furtherance of a redevelopment plan constitute a single project, which shall be deemed approved at the time of adoption of the redevelopment plan by the legislative body.” Further, an EIR on a redevelopment plan “shall be treated as a program EIR with no subsequent EIRs required for individual components of the redevelopment plan unless a subsequent EIR or a supplement to an EIR would be required by Section 15162 or 15163.”

Under CEQA Guidelines Section 15168 (Program EIRs), “If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required,” and “An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.”

Also, for environmental review of later projects in the Plan Amendments, the program EIR will:

- Provide the basis in an Initial Study for determining whether the later activity may have any significant effects;
- Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole; and
- Focus the EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.

As discussed on page II-1 of this EIR, the Project consists of six discrete components, which include amendments to three existing redevelopment plans (HP, BIT, and IBIP); adoption of three amended redevelopment plans (BVHP, BIT, and IBIP); implementation of three community redevelopment programs; rezoning of the Project Area;¹ development of the

Stadium Development Retail/Entertainment Center; and implementation of the Bayview Connections Urban Open Space project. While there are other proposals within the project area that are currently in various stages of planning, including, but not necessarily limited to, the Yosemite Slough bridge, the Illinois Street bridge, the development of new housing on infill sites in the Hunters Point Shoreline Activity Node, and/or the renovation of the Hunters View residential project, none of these proposals have secured funding and/or are not sufficiently advanced in the planning effort such that a stable and finite description can be provided for purposes of an environmental analysis; therefore, these proposals, and any other proposals that may be considered speculative, are not included as part of the project description. Nonetheless, where appropriate, they may be considered in the cumulative impacts analysis provided in this EIR.

As previously stated, each individual proposal within the Project Area would require project-specific environmental review in accordance with CEQA, which would either result in additional environmental documentation, a categorical exemption or exclusion, or a determination that the environmental analysis provided in this EIR adequately addresses the project's environmental impacts.

DEFINITION OF THE BASELINE

According to Section 15125 of the CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which the project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the Notice of Preparation (NOP) is published. The NOP for this EIR was published in 1999. However, the CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over time, and may vary to greater or lesser degrees depending upon the resource being evaluated, the use of an environmental baseline that differs from the date of the NOP is reasonable and appropriate when doing so results in a more accurate or conservative environmental analysis. For purposes of this environmental

analysis, baseline years ranging from 1998 to 2004 have been used, and the baseline year is identified in the individual environmental issue area discussions (refer to Sections III.A through III.Q).

C. ENVIRONMENTAL SETTING

As mentioned in Section II of this EIR, the Project Area is defined as the area represented by the BVHP, BIT, and IBIP Redevelopment Plan areas, as amended by the Project (refer also to Figure II-2). However, certain environmental issue areas consider a larger area when required by the data that is available or to provide a comprehensive analysis. For example, the population data provided by ABAG is aggregated by zones, and, in order to include the entire Project Area, the Study Area includes the larger area represented by most of Bayview Hunters Point. Traffic data is also collected and distributed by zones, and, as such, includes an area that is larger than the Project Area in order to evaluate off-site traffic impacts. If the area of analysis differs from the Project Area boundaries, it is identified in the individual environmental issue area discussions (refer to Sections III.A through III.Q).

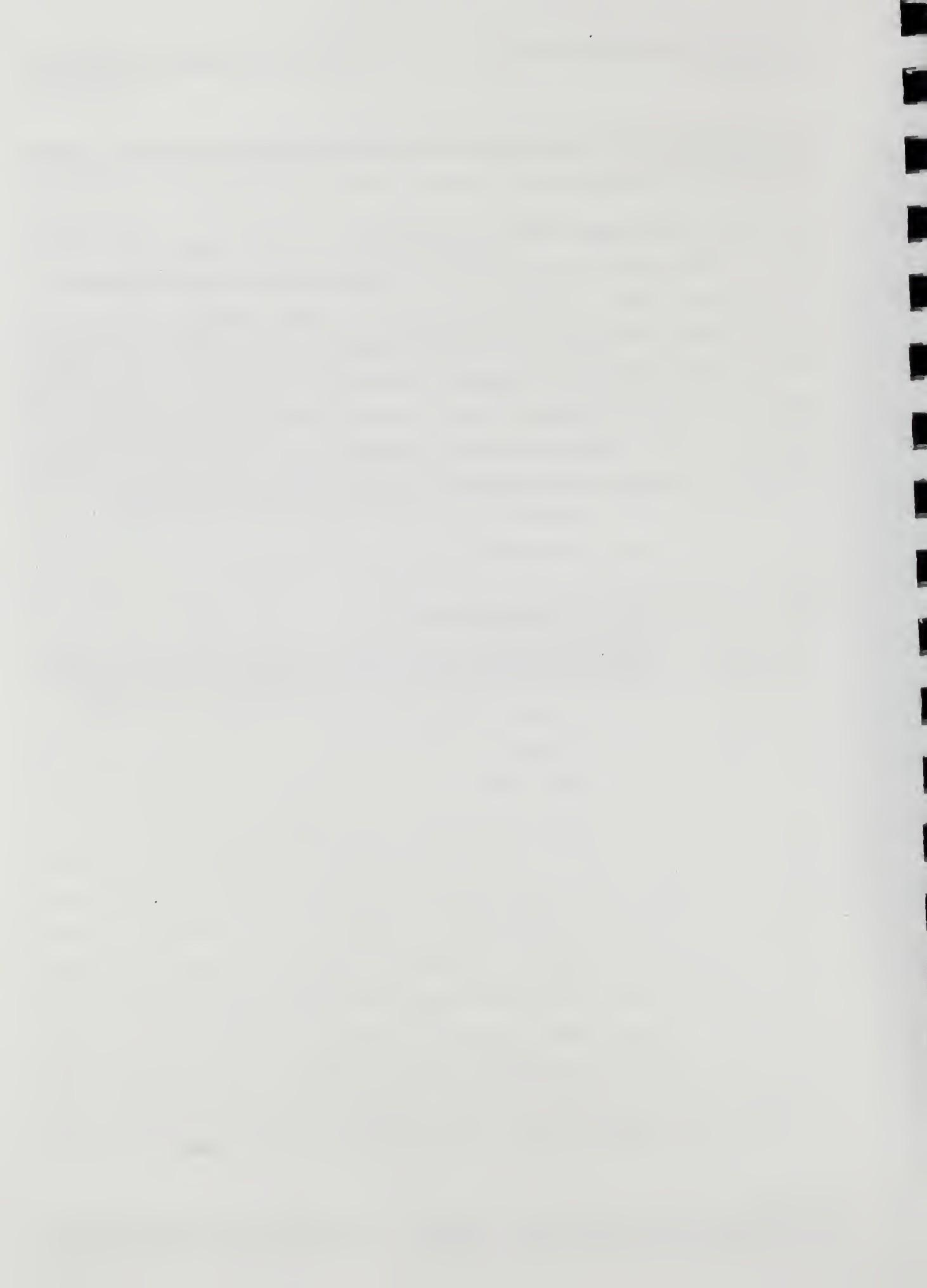
As discussed in Section II, Project Description, adoption of the 1,575-acre BVHP Redevelopment Plan includes an amendment to the existing 137-acre HP Redevelopment Project Area to include an additional 1,438 acres. Redevelopment activity within the 1,575-acre amended BVHP Redevelopment Plan area would be divided into seven activity nodes, including Northern Gateway, Town Center, Health Center, Oakinba, South Basin, Hunters Point Shoreline, and Candlestick Point. These seven activity nodes represent an evolution from, and refinement of, the four Focus Area Plans that were developed in the *Bayview Hunters Point Community Revitalization Concept Plan*. Concurrent to the amendment of the HP Redevelopment Plan, the IBIP and BIT Plans would also be amended to include land use districts consistent with the proposed land use and zoning changes in the BVHP Redevelopment Plan Area. Therefore, while the document may reference seven activity nodes, rezoning and redevelopment activities would occur within all of the Redevelopment Plan areas, including the BVHP, BIT, and IBIP Areas. Where applicable, this EIR addresses

existing conditions and/or impacts within the seven activity nodes, as well as the BIT and IBIP Redevelopment Plan Areas.

Project-related environmental impacts are presented as “Program Effects” and “Project Effects.” Program Effects are the environmental impacts that could result from amendment of the redevelopment plans; implementation of the three major community redevelopment programs, including the Economic Development Program, the Affordable Housing Program, and the Community Enhancements Program; and rezoning in the Project Area consistent with “Rezoning Option C: High Housing Option” as reflected in the Community Planning in the *Workbook*. “Project Effects” are the environmental impacts that could result from development and construction of the Bayview Connections Urban Open Space Project.

NOTES – *Introduction to the Environmental Analysis*

- ¹ The existing Hunters Point Redevelopment Plan Area does not include rezoning, transportation improvements, or community redevelopment activities; therefore, while it is included in the BVHP Redevelopment Plan area, as amended, it is not discussed in the environmental settings or impact analysis.



A. PLANS AND POLICIES

For informational purposes, this section describes the major land use and development policies embodied in the *San Francisco General Plan* and *San Francisco Planning Code* procedures related to historic preservation. This section also describes existing Redevelopment Plans in the vicinity of the Project Area and key community, regional, and state plans relevant to the Project. The Project provides opportunities for economic development by retaining and creating new businesses, and through new construction and rehabilitation of existing housing. The Project also promotes community enhancements through the creation of open space and streetscape programs and through design guidelines. These goals would be generally consistent with existing applicable *General Plan* goals and policies. Adoption of the Project would require that some components of the *General Plan* be amended so that all plans are consistent. The *General Plan* contains a number of elements with objectives, policies, and principles that are relevant to the Project and would not require any changes.

The Project will be reviewed by the Planning Department and the City Planning Commission to make findings of consistency with policies of the *General Plan*. Other aspects of the *General Plan* would be addressed when specific development projects within the Project Area are considered for approval. Decision-makers may identify potential conflicts between specific projects and goals and policies of the *General Plan*. During the review process, the decision-makers must evaluate and balance the potentially conflicting goals of different *General Plan* policies, including those in the South Bayshore Plan and the Waterfront Land Use Plan.

Additionally, this section describes the Eastern Neighborhoods community planning process which provides the basis for rezoning in the Project Area. Finally, this section identifies regional and state plans that are relevant to the Project. These plans are presented for informational purposes to provide the broader planning and policy context of the Project.

SAN FRANCISCO GENERAL PLAN

The *General Plan*, adopted by the Planning Commission and the Board of Supervisors, is both a strategic and long term document, broad in scope and specific in nature. It is implemented by decisions that direct the allocation of public resources and that shape private development. In short, the *General Plan* is the embodiment of the community's vision for the future of San Francisco. The *General Plan* is comprised of a series of elements, each one dealing with a particular topic, which applies citywide. The *General Plan* currently contains the following elements: Residence, Commerce and Industry, Recreation and Open Space, Community Facilities, Transportation, Community Safety, Environmental Protection, Urban Design and Arts. In addition, a Land Use Index cross-references the policies related to land use located throughout the *General Plan*. The *General Plan* also contains area plans that identify specific localized goals and objectives for a neighborhood or district of the City. The following four elements are relevant to the Project.

Commerce and Industry Element¹

The Commerce and Industry Element of the *General Plan* serves as a guide for the public and private sectors when making decisions related to economic growth and change in San Francisco. The three goals of the element – continued economic vitality, social equity, and environmental quality – focus on major economic sectors of San Francisco's economy, including manufacturing and industry, office/administrative space, and neighborhood commercial retail. The Project and its implementation focus on strengthening the economic base of the Project Area through the facilitation of new retail space and, as appropriate, new commercial and light industrial uses. The following objectives and policies pertain to the Project:

Objective 1: Manage economic growth and change to ensure enhancement of the total City living and working environment.

Objective 3: Provide expanded employment opportunities for City residents, particularly the unemployed and economically disadvantaged.

Objective 4: Improve the viability of existing industry in the City and the attractiveness of the City as a location for new industry.

Policy 5: Avoid encroachment of incompatible land uses on viable industrial activity.

Policy 7: Improve public and private transportation to and from industrial areas.

Objective 6: Maintain and strengthen viable neighborhood commercial areas easily accessible to City residents.

Policy 1: Ensure and encourage the retention and provision of neighborhood-serving goods and services in the City's neighborhood commercial districts, while recognizing and encouraging diversity among the districts.

Policy 2: Promote economically vital neighborhood commercial districts which foster small business enterprises and entrepreneurship and which are responsive to economic and technological innovation in the marketplace and society.

Policy 4: Encourage the location of neighborhood shopping areas throughout the City so that essential retail goods and personal services are accessible to all residents.

Policy 7: Promote high quality urban design on commercial streets.

Policy 10: Promote neighborhood commercial revitalization, including community-based and other economic development efforts where feasible.

Residence Element²

Adopted in 1990, the Residence Element of the *General Plan* addresses housing quantity, affordability, quality and accessibility. The City is currently in the process of adopting a new Housing Element that would replace the 1990 Residence Element. The proposed draft Housing Element contains objectives and policies that more directly address the City's present housing challenges concerning housing supply, mix, and production; affordability; neighborhood preservation; housing near transit corridors; and balancing housing and industrial development, particularly in the eastern neighborhoods of the City. This EIR identifies the objectives and policies of the 1990 Residence Element, as adopted by the Board of Supervisors.

The Project would provide a total of 3,700 net new dwelling units that would include a range of multi-family and single-family housing, both rental and ownership. In addition, the Project would implement an Affordable Housing Program. The Residence Element contains the following objectives and policies which are relevant to the Project:

Objective 1: To provide new housing for all income groups in appropriate locations.

Policy 2: Facilitate the conversion of underused industrial and commercial areas to residential use.

Policy 4: Encourage infill housing on appropriate sites in established neighborhoods.

Objective 2: To increase substantially the supply of housing without overcrowding or adversely affecting the prevailing character of existing neighborhoods.

Policy 1: Set allowable densities in established residential areas at levels which will maintain neighborhood scale and character.

Objective 3: To retain the existing supply of housing.

Policy 1: Discourage the demolition of existing housing.

Policy 2: Restrict the conversion of housing in commercial and industrial areas.

Objective 4: To maintain and improve the physical condition of housing.

Policy 1: Assure that existing housing is maintained in decent, safe and sanitary condition.

Policy 2: Maintain and improve the existing supply of public housing.

Objective 5: To provide housing affordable by all income groups, particularly low and moderate income households.

Policy 1: Use the City's financial powers and resources to reduce the cost and increase the supply of low and moderate income housing.

Policy 3: Seek inclusion of low and moderate income units in new housing development.

Objective 7: To provide maximum housing choice.

- Policy 3:* Promote the availability of units suitable for groups with special housing needs including large families, the elderly, and those needing group housing and emergency shelter.
- Policy 5:* Encourage economic integration in housing.
- Policy 6:* Provide adequate rental housing opportunities
- Policy 7:* Expand opportunities for home ownership.

Recreation and Open Space Element³

The Recreation and Open Space Element of the *General Plan* contains objectives and policies for maintaining, creating, and enhancing recreational and open space resources for the City. Existing open space shoreline resources are located in four of the proposed activity nodes: Northern Gateway (Islais Creek); Hunters Point Shoreline (India Basin); South Basin (Yosemite Slough); and Candlestick Point (Yosemite Slough and the Candlestick Point State Recreation Area). The Project would include a Framework Open Space Program to guide the proposed improvement, maintenance, and programming of publicly owned open spaces in the Project Area, which would be coordinated with the Recreation and Park Department and other local and state agencies. The Project would also create a water-oriented neighborhood in the Hunters Point Shoreline Activity Node. The following objectives and policies are relevant to the Project:

Objective 3: Provide continuous public open space along the shoreline unless public access clearly conflicts with maritime uses or other uses requiring a waterfront location.

- Policy 1:* Assure that new development adjacent to the shoreline capitalizes on its unique waterfront location, considers shoreline land use provisions, improves visual and physical access to the water, and conforms with urban design policies.
- Policy 5:* Provide new public open spaces along the shoreline at Islais Creek, India Basin, Hunters Point Naval Shipyard, and Candlestick Point.

Objective 4: Provide opportunities for recreation and the enjoyment of open space in every San Francisco neighborhood.

- Policy 3:* Renovate and renew the City's parks and recreation facilities.
- Policy 7:* Provide open space to serve neighborhood commercial districts.

Transportation Element⁴

The Transportation Element of the *General Plan* is composed of objectives and policies which relate to the nine aspects of the Citywide transportation system: General, Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrians, Bicycles, Citywide Parking, and Goods Movement. The Project would facilitate new development within each of the designated activity nodes. Key to stimulating economic development in the Project Area is the Third Street LRT project; and the Enhanced Truck Route Program to minimize effects of truck traffic on residential and commercial areas; and improved transit access, pedestrian circulation, and streetscape linkages in the Town Center Activity Node. Third Street, the commercial spine within the Project Area, is designated as a Transit Important Street in the Transportation Element. The Transportation Element contains the following objectives that are relevant to the Project:

Objective 2: Use the transportation system as a means for guiding development and improving the environment.

- Policy 2.1:* Use rapid transit and other transportation improvements in the city and region as the catalyst for desirable development, and coordinate new facilities with public and private development.
- Policy 2.4:* Organize the transportation system to reinforce community identity, improve linkages among interrelated activities, and provide focus for community activities.

Objective 11: Maintain public transit as the primary mode of transportation in San Francisco and as a means through which to guide future development and improve regional mobility and air quality.

Objective 24: Improve the ambience of the pedestrian environment.

- Policy 24.1:* Preserve existing historic features such as streetlights and encourage the incorporation of such historic elements in all future streetscape projects.
- Policy 24.2:* Maintain and expand the planting of street trees.

Objective 39: Make freeway and major surface street improvements to accommodate and encourage truck/service vehicles in industrial areas away from residential neighborhoods.

San Francisco Planning Code Article 10

Historic resources listed with the California Office of Historic Preservation (OHP) and San Francisco City Landmarks Preservation Advisory Board are located in three activity nodes within the Project Area (see discussion in Section III.J, Cultural Resources, pp. III.J-10). Article 10 of the *San Francisco Planning Code* sets forth procedures regarding the preservation of historical architectural and aesthetic landmarks in San Francisco. Article 10 implements preservation through City designation of landmarks and historic districts, and it provides for review of proposed alterations to listed historic resources by the Landmarks Preservation Advisory Board and the City Planning Commission. Article 10 permits the City to delay alteration or demolition of listed resources, but does not generally prohibit demolition.

South Bayshore Plan⁵

The South Bayshore Plan (as amended, July 1995), is an element , and area plan, of the *San Francisco General Plan* that covers the southeastern section of the City bound by Cesar Chavez Street to the north, US 101 to the east, the Bay to the west, and the San Francisco county line to the south, exclusive of the Hunters Point Shipyard. The South Bayshore Plan lays the initial foundation for much of the housing, economic development, and community enhancement programs embodied in the Project. Since adoption of the South Bayshore Plan, there has been increased concern about compatibility of industrial uses, and the appropriate types of industrial uses within Bayview Hunters Point, as reflected in the *Concept Plan* and Eastern Neighborhoods rezoning (see Section II, Project Description). The following objectives of the South Bayshore Plan pertain to the Project:

Objective 1: Stimulate business, employment, and housing growth within the existing general land use pattern by resolving conflicts between adjacent industrial and residential areas.

Objective 2: Improve use of land on Third Street by creating a more compact commercial area, establishing centers for growth of complementary uses, and restricting unhealthy uses.

Objective 3: Make surface street and freeway improvements to encourage truck traffic away from neighborhood residential and commercial areas.

Objective 5: Preserve and enhance existing residential neighborhoods.

Objective 6: Encourage construction of new affordable and market rate housing at locations and density levels that enhance the overall residential quality of South Bayshore.

Objective 7: Encourage healthy retail reuse in the existing commercial core of Third Street and complementary growth in adjacent sections.

Objective 10: Enhance South Bayshore's distinctive and positive features.

Objective 11: Improve definition of overall urban pattern of South Bayshore.

Objective 13: Provide continuous public open space along the shoreline of South Bayshore unless public access clearly conflicts with maritime uses or other non-open space uses requiring a waterfront location.

Waterfront Land Use Plan (Southern Waterfront Subarea)⁶

Approved in June 1997 and amended in October 2001, the Waterfront Land Use Plan (WLUP) is a land use policy document governing property under the jurisdiction of the Port of San Francisco (the Port), generally from Fisherman's Wharf to India Basin. The WLUP includes objectives for five sub-areas that specifically address the overall goals and objectives of the WLUP. Portions of three activity nodes in the Project Area are adjacent to Port-owned property within the Southern Waterfront Subarea: the northeast portion of the Northern Gateway Activity Node, the eastern portion of the IBIP area, and the northeast portion of the Hunters Point Shoreline Activity Node. The WLUP specifies acceptable land uses by the location at which they may be developed in the Southern Waterfront. Allowable uses on Port-owned land adjacent to the Northern Gateway, IBIP area, and Hunters Point Shoreline Activity Nodes are public access and open space.

Consistent with the WLUP, the Port currently has development plans in the Southern Waterfront for waterside open space and public access improvements to Herons Head Park

adjacent to the northeast shoreline of the Hunters Point Shoreline Activity Node, and expanded landscaping and greenway improvements along Islais Creek in the northern portion of the Northern Gateway Activity Node. The Port plans to work with the Agency to extend the greenway to Herons Head Park. Plans also call for development of a warehouse complex on the Pier 90-94 backlands area west of Cargo Way.⁷

Candlestick Point Special Use District

The Candlestick Point Activity Node accommodates the proposed San Francisco 49ers Stadium Development Retail/Entertainment Center. The Stadium Development Retail/Entertainment Center project was approved by San Francisco voters in June 1997. Proposition F amended the *General Plan*, *Planning Code*, and *Zoning Map* and established the Candlestick Point Special Use District to restrict the height of the stadium to 200 feet and 60 feet for the mall, and Proposition D calls for the issuance of \$100 million in bonds to help finance construction of the stadium.

In addition, the City established a special use district in the Candlestick Point Activity Node to accommodate the development of a stadium suitable for professional football and the National Football League's Super Bowl as well as the Stadium Development Retail/Entertainment Center, a shopping and entertainment center with open space and related parking facilities, as principal uses, and other uses.

PROPOSED EASTERN NEIGHBORHOODS REZONING COMMUNITY PLANNING PROCESS⁸

Bayview Hunters Point is one of four areas in the eastern portion of the City identified in the Planning Department's current Eastern Neighborhoods community planning and rezoning process. Visitacion Valley was included in the initial stages of the Eastern Neighborhoods community planning process. The planning for Visitacion Valley subsequently proceeded separately from the Eastern Neighborhoods process and focused on development opportunities on the 14-acre, vacant Schalage Lock property. The Eastern Neighborhoods, comprised of Showplace Square/Potrero Hill, The Mission, South of Market, and Bayview Hunters Point, and representing roughly one-quarter of the City, are being studied to identify core areas

where PDR businesses are needed to maintain a diverse economy. If approved, these core areas will be zoned to promote business and job expansion while the rest of the Eastern Neighborhoods will allow or expressly encourage housing.

The Eastern Neighborhoods rezoning is part of a larger initiative embodied in the Citywide Action Plan formulated by Planning Department to provide a comprehensive long-term framework for the allocation of development that will enhance the quality and character of the City's neighborhoods. The Citywide Action Plan calls for directing housing to places with good public transit and urban amenities, new office uses in and around downtown, and appropriate industrial uses to core industrial lands. Within the Eastern Neighborhoods, this effort has focused on balancing the need to expand housing opportunities while protecting PDR activities in industrial lands in the City.

The *Concept Plan*, discussed in Section II, Project Description, provided much of the community goals, objectives, and visioning used as the basis for the Eastern Neighborhoods community planning and rezoning effort. The Eastern Neighborhoods rezoning Option C: High Housing is generally consistent with the Concept Plan's community goals, objectives, and vision for Bayview Hunters Point. The Bayview Hunters Point portion of the Eastern Neighborhoods rezoning is covered, in large part, by the EIR document, as discussed in Section II, Project Description. The Eastern Neighborhoods rezoning will be subject to future environmental review and approval by the Planning Commission.

REDEVELOPMENT PLANS

Four specific redevelopment project areas have been established in Bayview Hunters Point that are integral to the Project (see Figure II.2): Hunters Point, IBIP, BIT, and the Shipyard. The existing HP Redevelopment Plan would be amended to include a 1,438-acre portion of the Project Area. In effect, the two plan areas would become the Project and renamed the Bayview Hunters Point Redevelopment Plan. Concurrent to the amendment of the HP Redevelopment Plan, the IBIP and BIT Redevelopment Plans would be amended to include land use districts consistent with the proposed land use and zoning changes in the Project

Area. The Hunters Point Shipyard Redevelopment Plan is being developed separately by a private developer. The relationship of the redevelopment plans to the Project is described below. The main Project elements have already been described in Section II, Project Description.

Hunters Point Redevelopment Plan

The Hunters Point Redevelopment Plan was adopted in 1969 and encompasses 137 acres that were formerly occupied by wartime housing. The plan's original goals included creating a mixed-income neighborhood through construction of single- and multi-family affordable housing for renters and owners; new community facilities, parks, and schools; and new infrastructure of streets and utilities. Currently, this Project Area is almost completely built out with 1,520 affordable units and 269 market-rate units.

India Basin Industrial Park Redevelopment Plan

Adopted in 1969, the India Basin Industrial Park Redevelopment Plan comprises 126 acres of former blighted industrial land. The original goals of the plan included creating a vibrant modern industrial park anchored by a commercial/service center, new building construction and rehabilitation of existing facilities, and new utilities and streets with landscaped boulevards. Roughly 1.6 million square feet of development has been completed to date.

Bayview Industrial Triangle Redevelopment Plan

Adopted in 1980, the Bayview Industrial Triangle Redevelopment Project focuses on the renovation of about 20 acres of industrial land. The Redevelopment Project relied on funding from the Community Development Block Grant Program; however, the federal funding did not materialize and as a result, this Project Area has been largely dormant since the plan was adopted.

Hunters Point Shipyard Redevelopment Project

The Hunters Point Shipyard Redevelopment Project covers land comprising the 500-acre Hunters Point Naval Shipyard. In March 1999, the Agency Commission selected Lennar/BVHP Partners as the primary developer of the Shipyard. The Shipyard property would be developed separately from the Project.

COMMUNITY PLANNING

Bayview Hunters Point Community Revitalization Concept Plan⁹

As required by California Community Redevelopment Law, in 1997 the Agency staff worked closely with Bayview Hunters Point to identify candidates and hold a community election of a 21-member inclusive PAC to help develop the framework and vision for economic revitalization of the Bayview Hunters Point area. To achieve this goal, the PAC prepared the *Concept Plan* with the Agency staff and a number of consultants. Adopted in November 2000,¹⁰ the *Concept Plan* identifies community needs and sets forth a shared vision statement to guide the redevelopment planning process for BVHP. The BVHP Redevelopment Plan and the Eastern Neighborhood Rezoning Option C are consistent with the *Concept Plan's* goals and objectives. The overall amount of development under the Project is also accommodated by the development framework provided by the Eastern Neighborhoods Zoning Option C.

The *Concept Plan* identifies the following seven major revitalization strategies to implement the community's goals:

1. Promote local economic and employment development first.
2. Improve education, training, and employment opportunities for residents.
3. Focus coordinated investments in high priority areas where they will have the greatest visibility and impact.
4. Encourage civic participation through interactive public processes and foster cultural development through the arts.
5. Conserve existing housing and provide new housing.

6. Address environmental problems and identify opportunities that increase the quality of life.
7. Improve the physical environment and transportation systems.

The *Concept Plan* identifies four Focus Area Plans in which economic revitalization would be concentrated: Town Center, Northern Industrial District, Hunters Point Shoreline, and the South Basin District. The seven activity nodes identified in the Project Area represent an evolution from, and a refinement of, the four Focus Area Plans that were developed in the *Concept Plan*. The economic development framework and programs proposed for each of the seven activity nodes are consistent with the vision statements for each of the four Focus Area Plans defined in the *Concept Plan*.

Bayview Connections Urban Open Space Project¹¹

The Bayview Connections Urban Open Space Project is a separate ongoing project within the Project Area. The purpose of the Bayview Connections Urban Open Space Project is to design pedestrian and streetscape improvements which will effectively link transit to retail, services, and cultural facilities in the center of Bayview Hunters Point, focusing on the Town Center Activity Node and southeastern portion of the Oakinba Activity Node extending along Oakdale Avenue between Quint and Phelps Streets. The project is a collaborative planning effort between the San Francisco Municipal Railway, the Agency, the Department of Public Works, and the Planning Department. The goals and objectives of the project focus on livability, economic development, mobility, consensus, and feasibility.

ENVIRONMENTAL JUSTICE PROGRAM

Environmental justice is a key concern in Bayview Hunters Point. Several city departments have long recognized that southeast San Francisco has a disproportionate number of industrial and polluting facilities (see Section III.K, Hazards and Hazardous Materials).¹² Two of the city's largest industrial and infrastructure uses are located in the Project Area: The PG&E Hunters Point Power Plant in the Hunters Point Shoreline Activity Node, and the Southeast Water Pollution Control Plant in the Town Center Activity Node. The City and County of San

San Francisco currently does not have a formal policy on environmental justice; however, the San Francisco Department of the Environment's Strategic Plan (2003–2006) sets forth an environmental justice program focused on the Bayview Hunters Point and Potrero Hill neighborhoods.¹³ The Department of the Environment has prepared a draft environmental justice policy statement that is undergoing internal review for future consideration and approval by the Board of Supervisors.¹⁴ The Department of the Environment defines environmental justice as:

Environmental Justice is the fair treatment and meaningful involvement of all people in environmental decision-making. San Francisco's Environmental Justice Program promotes the protection of human health and the environment, empowerment via public participation, and the dissemination of relevant information to inform and educate affected communities so that all San Franciscans have an equal opportunity to lead healthy, fulfilling, and dignified lives.

The Environmental Justice Program has three goals:

- Goal 1:** Ensure that the least harmful alternatives to polluting infrastructures and/or activities are established in San Francisco.
- Goal 2:** Mitigate historical environmental and health-related inequities and ensure the equitable distribution of environmental benefits and burdens.
- Goal 3:** Educate and empower communities to support sustainability and to have a voice in decisions that may affect their environmental well-being.

The Board of Supervisors adopted a San Francisco Precautionary Principal policy (Ordinance 171-03, July 3, 2003), which requires a thorough exploration and a careful analysis of a wide range of alternatives, and selection of an alternative that presents the least potential threat to human health and the City's environment. Public participation and an open and transparent decision making process are critical to finding and selecting alternatives.

Balancing the City's desire to preserve and encourage new PDR activities that are environmentally compatible with adjacent uses, and creating land use mixes and patterns that provide employment and economic revitalization opportunities for Bayview Hunters Point residents are key environmental justice issues.

REGIONAL PLANS

The Bay Trail Plan

Mandated by California Senate Bill 100, the Bay Trail Plan proposes development of a regional hiking and bicycling trail around the perimeter bayside of the Bay Area, which includes San Francisco and San Pablo Bays. The plan requires that the Bay Trail: (1) provide connections to existing park and recreation facilities, (2) create links to existing and proposed transportation facilities, and (3) be planned in such a way as to avoid adverse effects on environmentally sensitive areas. The Bay Trail Plan contains policies to guide the selection of alignments of the trail route and implementation of the trail system. Existing Bay Trail spine trails are located along the inland Bay and shoreline portions of the Hunters Point Shoreline and Candlestick Point Activity Nodes, within the Candlestick Point State Recreation Area. The spine trail is the main alignment, intended as a continuous recreational corridor encircling the Bay and linking the shorelines of all nine Bay Area counties, although in some constrained areas the spine trail is located inland.

STATE PLANS

San Francisco Bay Plan

The Bay Plan is administered by the San Francisco Bay Conservation and Development Commission (BCDC), a state agency with permit authority over the Bay and its shoreline. BCDC, created by the McAteer-Petris Act in 1965, has authority to regulate filling, dredging, and changes in use in the San Francisco Bay and to regulate new development within 100 feet of the shoreline to ensure that maximum feasible public access to the Bay is provided. The Commission is also charged with ensuring that the limited amount of shoreline property suitable for regional high priority water-oriented uses, such as ports, water-related industry, water oriented recreation, airports, and wildlife areas, is reserved for these purposes. Proposed land uses and structural changes are governed by policies regarding public access. BCDC can require, as conditions of permits, shoreline public access improvements consistent with a proposed project, such as, but not limited to, pathways, observation points, bicycle

racks, parking benches, landscaping, and signs. The major BCDC planning document applicable to the Project Area is the San Francisco Bay Plan, adopted in 1969 and since amended, which specifies goals, objectives and policies for existing and proposed waterfront land use and other BCDC jurisdictional areas. Water-oriented development, recreation, and public access are proposed development concepts for the Hunters Point Shoreline and Candlestick Point Activity Nodes. These uses could be subject to oversight and permitting authority by BCDC.

Candlestick Point Recreation Master Plan

The Candlestick Point Recreation Master Plan (amended 1987) establishes approximately 252 acres of shoreline recreation area extending from the north side of Yosemite Slough in the South Basin Activity Node to the county line, south of the Candlestick Point Activity Node. Candlestick Point State Recreation Area was the first California State Park unit purposely acquired to provide state park amenities in an urban setting. The recreation area offers nature trials, bicycle trails, hiking, fishing, windsurfing, and picnic areas. A spine trail Bay Trail is also located in the Candlestick Point Activity Node. There are current plans for a wetlands improvement restoration project in the Yosemite Slough portion of the recreation area that, at full buildout, will include a nature center, an extension of the Bay Trail spine trail, and approximately 20 acres of wetlands restoration, including a bird nesting and refuge area.¹⁵

NOTES – *Plans and Policies*

- ¹ City and County of San Francisco, Planning Department, *San Francisco General Plan*, Commerce and Industry Element.
- ² City and County of San Francisco, Planning Department, *San Francisco General Plan*, Residence Element, adopted September 13, 1990.
- ³ City and County of San Francisco, Planning Department, *San Francisco General Plan*, Recreation and Open Space Element.
- ⁴ City and County of San Francisco, Planning Department, *San Francisco General Plan*, Transportation Element, adopted July 1995.
- ⁵ City and County of San Francisco, Planning Department, *San Francisco General Plan*, South Bayshore Plan, amended July 1995.

- ⁶ Port of San Francisco, *Waterfront Land Use Plan*, amended October 2001.
- ⁷ Douglas Wong, Executive Director, Status Report on Southern Waterfront Planning, March 3, 2004.
- ⁸ San Francisco Planning Department, *Community Planning in the Eastern Neighborhoods, Rezoning Options Workbook*, February 2003.
- ⁹ Bayview Hunters Point Redevelopment Project Area Committee, *Bayview Hunters Point Community Revitalization Concept Plan*, March 2002.
- ¹⁰ The PAC adopted an Enhanced Concept Plan in March 2002, which consists of the November 2000 text plus photographs and color graphs.
- ¹¹ MUNI and Bayview Hunters Point Project Area Committee, Bayview Connections Urban Open Space Project, July 2000.
- ¹² Environmental Justice is a topic usually reserved to federal environmental documents. However, in December 2003, the San Francisco Human Rights Commission (HRC) conducted workshops on environmental racism in Bayview Hunters Point and recommended that the Board of Supervisors adopt Principles of Environmental Justice and adopt environmental justice legislation for the City and County of San Francisco. Other City departments represented at the workshop included the Department of Public Works, the Public Utilities Commission, and the Planning Department.
- ¹³ San Francisco Department of the Environment, Strategic Plan 2003-2006.
- ¹⁴ Ann Eng, San Francisco Department of the Environment, telephone conversation, May 24, 2004.
- ¹⁵ Brian Hickey, Bay Sector Superintendent, California Department of Parks and Recreation, telephone conversation, May 20, 2004.



B. LAND USE AND ZONING

This section describes the land use and zoning setting in the Project Area and vicinity, including the general pattern of land uses in Bayview Hunters Point. The impacts address the potential land use and zoning changes with implementation of the Project, including land use compatibility and effects on existing land use character.

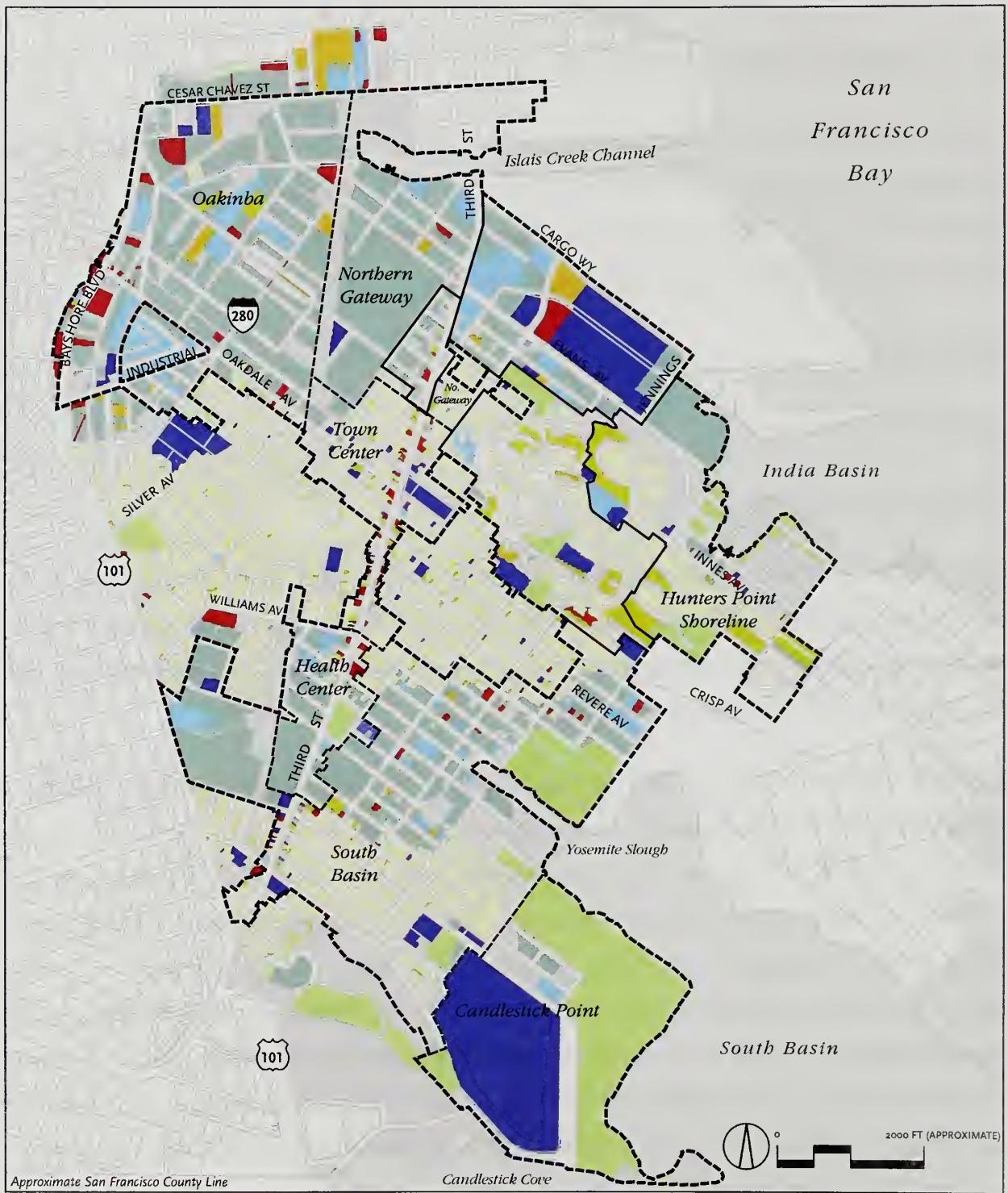
SETTING

EXISTING LAND USES

Bayview Hunters Point

Bayview Hunters Point, which was previously referred to as South Bayshore, is located in the southeastern quadrant of the City and County of San Francisco. The area encompasses the residential neighborhoods and industrial lands generally bounded by Cesar Chavez Street, US 101, San Francisco Bay and the county line.

Bayview Hunters Point (BVHP) is characterized by both well-established residential neighborhoods and major industrial areas. Figure III.B-1 shows the general land use patterns in BVHP. Third Street is the central north-south corridor through the community. Local-serving retail shops and commercial businesses, many of which are vacant, are located along Third Street, interspersed with civic, religious, and social service institutions. During construction of the Third Street LRT project (scheduled for completion in 2005), many of the retail businesses on Third Street have been effected by temporary sidewalk closures, removal of curbside parking, and traffic detours and delays. Residential neighborhoods extend east and west from Third Street. Roughly two-thirds of the residential units are single-family units, and one-third are multi-family units located mostly on the lower slopes of Bayview Hill and Hunters Point Hill. New multi-family housing has been constructed in pockets along Third Street, Williams Avenue and Innes Avenue. Older heavy industrial areas form edges to the north and east beyond the light industrial (M-1) areas that are adjacent to residential



SOURCE: San Francisco Planning Department, 2003

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NOTE: Land uses on this figure are generalized and may not be accurate at a parcel by parcel level.

-----	Redevelopment Project Areas	[Light yellow square]	Residential	[Light green square]	Mixed residential	[Dark blue square]	Cultural/Institutional/Educational	[Yellow-green square]	Office	[Red square]	Retail
-----	Activity Node Boundary	[Teal square]	Industrial	[Light blue square]	Mixed use	[Light green square]	Park/Open space	[Pink square]	Visitor/Hotel	[White square]	Vacant/Right-of-way

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.B-1 GENERALIZED EXISTING LAND USES

neighborhoods. There is also a light industrial area within the south central portion of the community. Residential uses are intermingled or adjacent to industrial uses in these areas. Industrial activities in these edge areas consist primarily of production, distribution and repair (PDR) uses (see definition later in this section). Public open space is interspersed throughout the community in public parks and major open space and recreation areas located along the bay shoreline. The Caltrain right-of-way extends north-south through the Project Area, one block west of Third Street.

Existing general land uses within each of the Project Area activity nodes are described below.

Northern Gateway

The Northern Gateway Activity Node is between Cesar Chavez Street and Jerrold Avenue, the Caltrain right-of-way, and Third Street. This activity node serves as the northern entranceway to BVHP from the Central Waterfront, Port lands and downtown neighborhoods to the north. Existing land uses are primarily industrial, including small-scale single and mixed uses within a variety of building forms. Bayview Plaza at Third Street near Evans Avenue provides a cluster of retail uses, including a Walgreens, copy shop, several restaurants, as well as commercial offices. In the Northern Gateway area, large industrial uses such as regional moving and storage companies and wholesale distributors are intermingled with a range of small, local businesses such as auto parts distributors and bulk mail assembly services. Open space uses include the Islais Creek Promenade.

Town Center

The Town Center is between Jerrold and Williams-Van Dyke Avenues, and Phelps and Lane Streets. The Third Street corridor in this activity node, particularly in the vicinity of the Bayview Opera House and Plaza at Third and Oakdale, is considered the heart of the Bayview Hunters Point community. The Town Center Activity Node comprises an approximately 12-block Moderate-Scale Neighborhood Commercial district on Third Street extending north-south through the center of the community. The shopping area includes a variety of shops, eating establishments, cleaners, beauty supply stores, a hardware store, a neighborhood

grocery, and a number of liquor stores. Other uses include one- and three-story mixed-use residential above commercial on Third Street, and single- and multi-unit residential east and west of Third Street. There are a number of civic institutions, including the Bayview Opera House (a City landmark), the Joseph Lee Playground and Recreation Center, the Anna E. Waden Library, several churches and social services, and the Southeast Community Facility, which houses a City College campus, a job training and career program, and is a site for community meetings and civic events.

Health Center

Existing uses in the Health Center Activity Node include industrial uses, a public health facility, and senior housing and support services. The Health Center Activity Node is located between William-Van Dyke Avenue and Fitzgerald Avenue, the Caltrain right-of-way, and Keith Avenue. This activity node is anchored by the Southeast Health Center and the nearby Geraldine Johnson Manor senior housing development. Other social services in the activity node include the Bayview Hunters Point Multipurpose Senior Center at Third Street and Yosemite Avenue. The Bayview Playground and Martin Luther King Jr. pool are on Third Street between Armstrong and Carroll Avenues. The Health Center Activity Node is also characterized by large and underutilized industrial parcels, such as the former Coca Cola and Macy's properties on Third Street at the southern end of the node. These properties are currently proposed for multi-family residential housing development.

Oakinba

The Oakinba Activity Node is between Cesar Chavez Street and Industrial Way, and Oakdale Avenue, Bayshore Boulevard and the Caltrain right-of way. The Oakinba Activity Node consists of mostly PDR, mixed-use, and vacant parcels, although the types of uses vary by location. The San Francisco Produce District occupies the majority of the central area. The produce district is characterized by large shed-style buildings with trucking bays fronting the streets. Along the western length of the node is Bayshore Boulevard, a corridor dominated by large-scale commercial uses with off-street parking frontages. Due to its proximity to the I-

280 and US 101 freeways, many auto-oriented retail uses and fast-food establishments have developed along the corridor.

South Basin

South Basin Activity Node is the largest activity node in the Project Area. It is located between Williams and Meade Avenues, and US 101 and Fitch Street. The northern and eastern portions of the activity node contain a variety of small-scale industrial uses such as auto repair shops, food distributors, bulk warehouses, recycling facilities, and vacant parcels. Established single-family residential uses are in the southern portion, bordered by the industrial uses to the north, some of which are interspersed with residential uses. Truck traffic traveling east-west from the industrial areas to the north and in the vicinity of the Hunters Point Shipyard often encroach onto the residential streets to access US 101, resulting in conflicts between residential uses and industrial activities in the area. Open space includes developed and undeveloped portions of the Candlestick Point State Recreation Area around the eastern perimeter of Yosemite Slough and Gilman Park on Gilman Avenue at Griffith Street.

Hunters Point Shoreline

Hunters Point Shoreline Activity Node is between Jennings Street, and Navy Road, Donahue Street and Earl Street. This activity node contains residential, industrial, and vacant land, and shoreline open space. Notable historic landmarks include Our Lady of Lourdes Catholic Church and the Albion Water Company. Residential uses include former wartime housing in the Westbrook, Hunters Point A and B, and Hunters View public housing developments, which are proposed to be renovated by the San Francisco Housing Authority under the Hope VI program. A private-sector multi-family housing project was recently built at 800 Innes Avenue. Industrial uses are interspersed among residential uses near the India Basin shoreline. The 35-acre Hunters Point Power Plant is located between Jennings Street and Hunters Point Boulevard west of Herons Head Park. The Hunters Point Power Plant is planned for closure in 2005.¹ Vacant and underused parcels are scattered throughout the activity node, with the largest being a 13.5-acre site north of Innes Avenue adjacent to and west of the Hunters Point Shipyard. The Milton Meyer Recreation Center, including the

Hunters Point Gym and ball field, is located near the southern edge of this activity node. The 11.4 acre India Basin Shoreline Park is along the shoreline with pathways that link to the Bay Trail. The shoreline area includes several wetland restoration and public open space projects at Herons Head Park and India Basin. Due to the steep terrain within the southern half of this activity node, many of the area residents do not have direct or convenient access to shoreline open space.

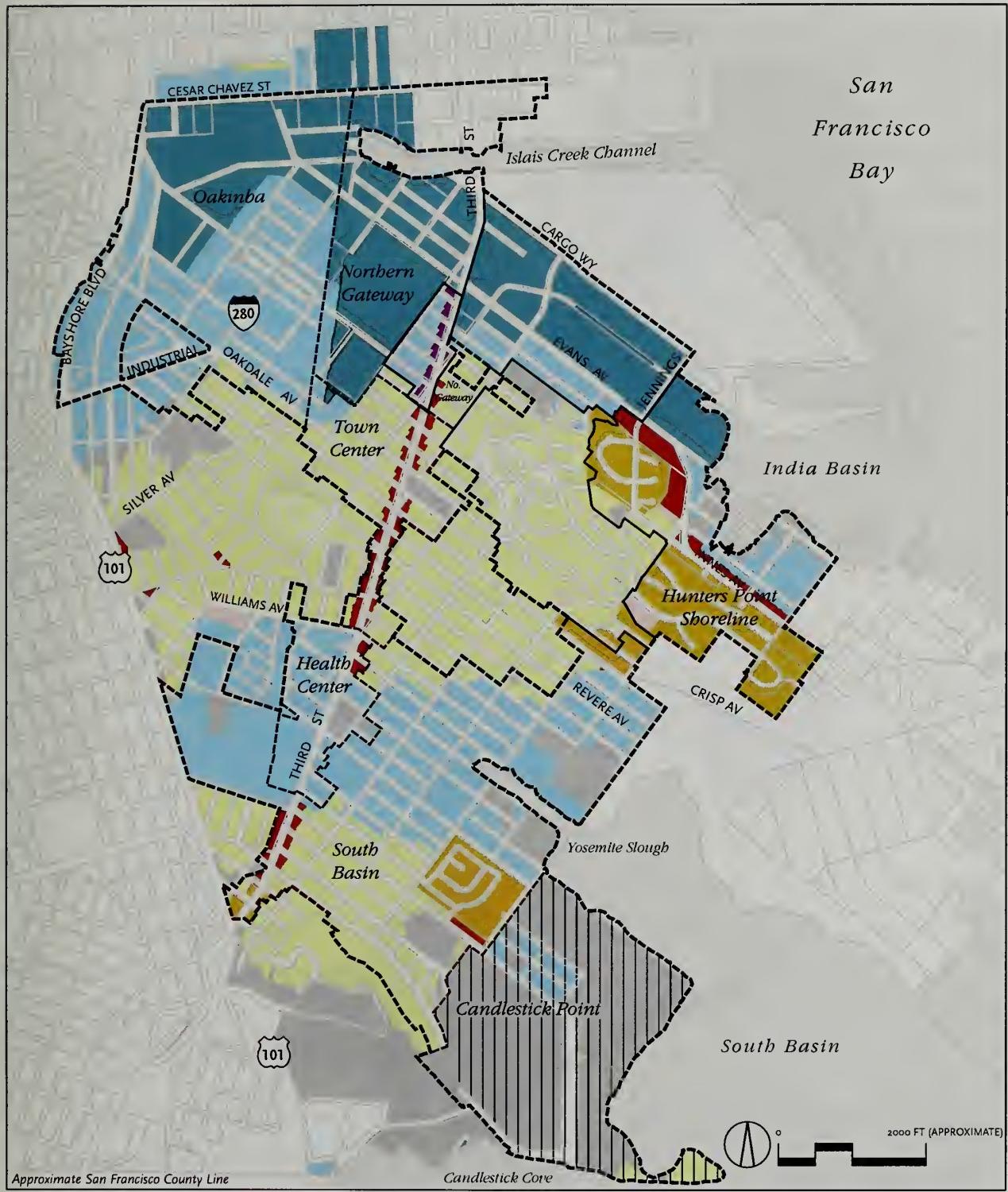
Candlestick Point

The Candlestick Point Activity Node, between Fitch Street and Jamestown Avenue at the southeast corner of the Project Area, is entirely within the 350-acre Candlestick Point Special Use District (SUD). The Special Use District contains Candlestick Park Stadium which is leased by the San Francisco Recreation and Park Department to the San Francisco 49ers football team, roughly 9,200 surface parking spaces, and private businesses along Gilman Avenue. Approximately 72 acres of the Candlestick Point State Recreation Area have been developed along the shoreline with a network of paved and dirt paths, bathroom structures, picnic facilities, two fishing piers, paved lookout points, and a boat launch facility. The remaining 103 acres, including the area surrounding Yosemite Slough, have not been developed and are currently used for overflow stadium parking.

EXISTING ZONING

Figure III.B-2 shows existing generalized zoning classifications in the Project Area and surrounding Bayview Hunters Point neighborhood. For most of this area, the San Francisco Planning Code is the controlling document, however in the three existing redevelopment project areas: Hunters Point, Bayview Industrial Triangle and the India Basin Industrial Park, the redevelopment plans are the controlling document. The land use and height designations shown in Figures III.B-2 and III.B-3 include the controls from the redevelopment plans.

As shown in Figure III.B-2, the northern section of the Project Area, primarily in the Northern Gateway and Oakinba Activity Nodes, is zoned Heavy Industrial and Light Industrial. Properties fronting Third Street in the Town Center Activity Node are zoned



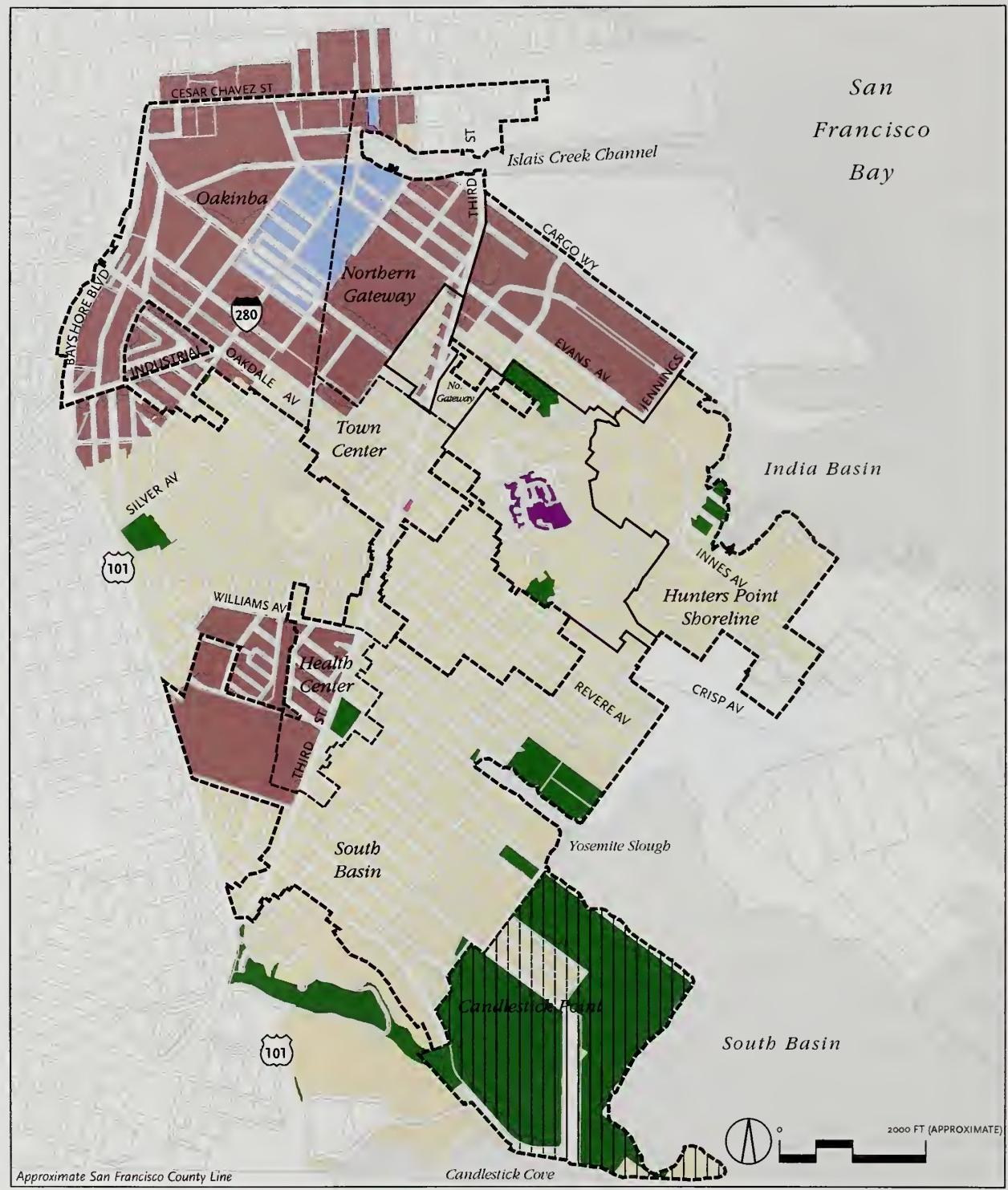
SOURCE: San Francisco Planning Department, 2003; San Francisco Redevelopment Agency, 2004

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Redevelopment Project Areas	Residential—med density	Neighborhood commercial shopping center	Neighborhood commercial	SFRA Commercial/ Residential
Activity Node Boundary	Residential—low density	Public	Heavy industrial	Light industrial
	Heavy commercial	Candlestick Point Special Use District		

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.B-2 EXISTING ZONING DESIGNATIONS



SOURCE: San Francisco Planning Department, 2003; San Francisco Redevelopment Agency, 2004

10-12-04

----- Redevelopment Project Areas
- - - - - Activity Node Boundary

[Icon] 60 Retail/
150-200 Feet Stadium [Icon] 160 Feet [Icon] 105 Feet [Icon] 80 Feet [Icon] 65 Feet [Icon] 40 Feet [Icon] Open space

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.B-3 EXISTING HEIGHT DISTRICTS

primarily Moderate-Scale Neighborhood Commercial (NC-3). Pockets of Heavy and Light Industrial zoning exist on the northern and southern edges of the corridor within the Northern Gateway Activity Node, while pockets of Light Industrial zoning exists on the southern edges within the South Basin Activity Node. Residentially zoned land is located east and west of Third Street in the Town Center and South Basin Activity Nodes. Residential, Industrial and Small-Scale Neighborhood Commercial (NC-2) zoning classifications are in the Hunters Point Shoreline Activity Node. There is a small Neighborhood Commercial Cluster (NC-1) district along Gilman Avenue in the South Basin Activity Node. The southern portions of the Project Area generally are zoned Residential and Light Industrial in the South Basin area. The Candlestick Point Activity Node is zoned Public with a Candlestick Point Special Use District overlay.

EXISTING HEIGHT LIMITS

Existing building heights are low to medium rise, generally one to three stories, throughout the Project Area. Existing height limits are primarily 40 feet in the residential areas throughout the Project Area (see Figure III.B-3). A 65-foot height limit straddles the Oakinba and Northern Industrial Activity Nodes, except for a central portion within these activity nodes that has an 80-foot height limit. Sixty-five-foot height limits are also allowed in a portion of the Health Center Activity Node. The Candlestick Point Activity Node contains a base height limit of 60 feet, however heights of 150 and 200 feet are permitted under prescribed conditions within the Candlestick Point Special Use District.

EASTERN NEIGHBORHOODS REZONING EFFORTS²

As described in Section II, Project Description, p. II-7, the City has initiated a community planning and rezoning process in the eastern neighborhoods of San Francisco to address the long-term goals of these communities and to develop permanent zoning controls that will resolve potential incompatibilities between residential, industrial, and commercial land uses. These efforts have focused on balancing the need to expand housing opportunities while

protecting existing and future opportunities for production, distribution and repair activities in industrial lands.

The Eastern Neighborhoods rezoning efforts cover Showplace Square/Potrero Hill/Central Waterfront, the Mission, South of Market and BVHP, but do not include existing redevelopment project areas, such as Mission Bay or Hunters Point Shipyard, and Port lands.³ The Eastern Neighborhoods have the widest mix of uses in the city. Residential, office, retail, production, distribution, and repair establishments co-exist throughout the neighborhoods, and are often intermingled. Uses are mixed both horizontally and vertically, so the same parcel may contain offices, retail space, some PDR activities, and even housing. Conflicts among land uses occur often, particularly between residential and industrial uses, where residents are exposed to noise, truck traffic, loading/unloading activities, nighttime operations, lighting, and odor impacts associated with different types of industrial uses, including PDR activities.

All of the City's industrially zoned land is located in the Eastern Neighborhoods, in existing redevelopment project areas (such as Mission Bay South, India Basin Industrial Park, Bayview Industrial Triangle and the Hunters Point Shipyard) and in the Port areas. Because industrially zoned land permits a wide spectrum of uses and tends to be less expensive than most land in San Francisco, it has become attractive to office and residential developers. As a result, the amount of land available for industrial development in the City has been shrinking due to development of commercial uses and housing on industrial lands.

The Planning Commission adopted Interim Controls in August 1999 that divided industrially zoned land between that which would be protected and that which could be used to increase the City's housing supply.

Characteristics of PDR Uses and Activities

PDR businesses occupy a variety of building types, with differing spatial relationships and requirements.⁴ Despite their diversity, PDR uses share the need for relatively flexible building space, cheap rents, and in many cases, separation from housing. The specific character of PDR businesses in the Eastern Neighborhoods is also derived from the clustering of similar

and related businesses at specific locations and the configuration of their buildings for equipment and storage space and streets for truck access and loading activities.

To understand these differences and similarities, PDR uses can be organized into light, medium, and core, based on the total amount of building space for the business; the amount of space required for equipment and storage, the amount of space for open storage; the type of loading facilities required; the amount of trucking activity generated and certain land use compatibility factors, such as noise and hours of operation. The characteristics of these PDR activities are summarized in Table III.B-1.

Existing Land Available for PDR Uses

The current supply of land available for PDR activities is constrained by other land uses that compete for industrially zoned land. Current zoning allows light PDR uses throughout the city in commercially zoned districts, but not in residentially zoned districts.⁵ Light PDR uses are also permitted, and are often found, in industrial districts. Conversely, medium and core PDR businesses can only be located in industrial lands, which are generally those lands that are currently zoned Light Industrial and Heavy Industrial. At the same time, industrially zoned land allows a wide range of uses from residential to heavy industrial.

Therefore, core and medium PDR businesses have had to compete for a limited supply of industrial land not only with light PDR businesses but also with residential and commercial uses.

As of February 2003, the Planning Department estimates that the supply of land available for PDR activities is approximately 800 acres, including land available for such uses in the existing India Basin Industrial Park and Bayview Industrial Triangle Redevelopment Project Areas, but not including the Hunters Point Shipyard Redevelopment Project Area or the Port lands.⁶

TABLE III.B-1
CHARACTERISTICS OF PRODUCTION, DISTRIBUTION AND REPAIR (PDR)
ACTIVITIES

PDR Category	Primary Business Focus	Typical Activities	Floor Area, Storage, and Loading Requirements	Average Sq. Ft. Per Worker	Compatibility with Residential / Other Uses
Light PDR	Repair and Services	Auto repair, small catering services, graphic design, small radio stations, small messenger operations.	Less than 10,000 sq. ft. Minimal trucking/loading requirements.	450 sq. ft.	Generally Compatible
Medium PDR	Production and Distribution, including larger products	Printers and publishers, showrooms, landscaping/horticultural services, film producers, caterers, wholesale distribution (e.g., jewelry and furniture).	10,000 sq. ft. or greater. Large ground floors for storage and processing; trucking activity, but less than Core PDR.	500 sq. ft.	Less compatible, but can be compatible if appropriate isolation from noise, loading and trucking.
Core PDR	Larger Scale Production and Distribution	Small trucking operations, apparel manufacturing, distribution centers (e.g., produce), construction materials suppliers, large showrooms, paper manufacturing and large publishing operations.	Moderate to heavy truck traffic, large ground floor areas with outdoor storage yards, nighttime operations and loading.	600 sq. ft.	Incompatible due to noise, heavy truck traffic, nighttime operations, and odor.

Source: San Francisco Planning Department, Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook – First Draft, February 2003; and PDR Definitions, Defining Production/Distribution/Repair, December 2003.

Existing PDR Uses in Bayview Hunters Point

Of the estimated 800 acres of land available for PDR uses in the Eastern Neighborhoods, roughly half, or 400 acres, is in Bayview Hunters Point, consistent with the historic role of BVHP as the City's largest industrial base.

PDR activities in Bayview differ from those in other areas of the City in terms of their space needs and scale of activities. Most of the PDR activities in BVHP are concentrated in the food and beverage, construction and transportation sectors. Businesses in these sectors require more space to accommodate the storage and use of large equipment than other industrial businesses, as well as nighttime shift work and loading operations. Those uses and activities have created land use conflicts, particularly when industrial activities have generated human health hazards and safety risks. The high volume of truck traffic and loading operations also pose conflicts in residential areas, and have raised residents' concerns over noise and safety.

IMPACTS

SIGNIFICANCE CRITERIA

Section 15382 of the CEQA Guidelines defines a significant effect on the environmental as “...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project...” The project would have a significant effect on land use if it would physically disrupt or divide an established community or have a substantial adverse impact on the existing character of the vicinity.

PROPOSED PROJECT

Implementation of the Project would, by 2025, result in approximately 2.4 million square feet (sf) of net new commercial and industrial floor area and an increase of approximately 3.5 million sf of net new residential space.⁷ Net new commercial floor area would include 1,591,850 sf of Retail and Entertainment; 425,000 sf of PDR; 220,000 sf of Management and Professional Services; 115,000 sf of Cultural/Institutional/Educational; 50,000 sf of Medical and Health Services; and 5,000 sf of Visitor Lodging. Total proposed development in the Project Area by land use category is shown in Table III.B-2. See Table II-1 in Section II. Project Description for a summary of potential land uses by activity node.

TABLE III.B-2
PROPOSED NET NEW DEVELOPMENT IN THE PROJECT AREA (2025)

Land Use Category	Net New Floor Area (square feet)	Percent Total
Cultural/Institutional/Educational	115,000	2
Medical and Health Services	50,000	1
Management and Information Professional Services	220,000	4
Production Distribution and Repair	425,000	7
Retail and Entertainment	1,591,850	27
Visitor Lodging	5,000	-- ¹
Total Commercial and PDR Uses	2,406,850	40
Total Residential Uses ²	3,537,500	60
TOTAL ALL USES	5,944,350	100

Source: San Francisco Redevelopment Agency, 2004.

Notes:

1. Less than 0.01 percent.
2. Assumes *Owner-Occupied*: 1,075 1-3 BR units at 1,300 sf/unit, *Rental Multi-Family*: 1,000 Studio/1 BR units at 700 sf/unit and 700 2-4 BR units at 975 sf/unit; and *Rental Single Family*: 925 3-4 BR units at 1,500 sf/unit. Average: 956 sf/unit.

Residential uses would be the largest land use category in the Project Area, comprising about 60 percent of all net new development. Residential uses would consist of 3,700 units of affordable and market-rate, multi- and single-family housing ranging from studios to four-bedroom units. After residential, the next largest use would be Retail and Entertainment. Almost half of total net new commercial and PDR development would be Retail and Entertainment uses in the Candlestick Point Activity Node, which accounts for 27 percent of all new uses and 66 percent of net new commercial and PDR development. PDR would comprise 7 percent of total net new development, followed by Management, Information and Professional Services which comprise 4 percent.

LAND USE CHANGES

The proposed Redevelopment Plan is intended to improve the land use character of the Project Area. The Project would result in new land use development, as well as rehabilitation of existing buildings within the Project Area.

The Project includes the rezoning of property and potential redevelopment funding to effect these changes in land use. The rezoning would encourage mixed use residential/commercial/PDR uses on properties fronting Third Street. It would require pedestrian-friendly urban design and transit-oriented development, to encourage a mix of residential and pedestrian-oriented uses to support the Third Street Light Rail project currently under construction. The rezoning of properties fronting Third Street would allow infill development in the Town Center and a shift from mostly industrial uses to a transit-oriented mix of uses in other segments of the Third Street corridor. This would create housing development opportunities along the Third Street light rail line as a means to promote transit-oriented development and aid in the City's ongoing housing crisis. Conversion of an industrial use to a residential use will require site-specific assessments to ensure appropriate toxic remediation as necessary.

Meanwhile, the industrial areas in the northern and southern portions of BVHP would be rezoned to preclude incursions of incompatible residential and commercial uses. Industrially-zoned areas nearer to residential districts would be rezoned to disallow noxious or toxic heavy industrial uses and encourage a buffer of Light PDR development in proximity to residential zones. Other industrial uses would be restricted and protected by zoning that specifically allows only Core PDR uses in areas served by existing and proposed truck routes away from residential districts. Finally, the northern portion of Bayshore Boulevard, adjacent to US Highway 101, will be rezoned to allow heavy or large-scale commercial uses, such as those currently existing along that corridor .

It is possible that some of the proposed land use changes could occur without implementation of the Project. However, private enterprise or City actions, working together or alone, would not be expected to achieve the changes necessary to eliminate economic and physical blight

within the Project Area by 2025. Implementation of the Project would upgrade the overall economic and physical conditions of BVHP, would safeguard the preservation and retention of existing residential uses, and create economic development opportunities for existing residents. The Project would not, in itself construct new development, but would encourage types of development through proposed rezoning and redevelopment tools.

Third Street Corridor

The most noticeable change in land use character and patterns would occur on Third Street, which is the gateway and principal identity of the BVHP community. Implementation of the Project would be expected to change Third Street into a moderate-scale, transit-oriented mixed-use residential and commercial corridor within about one block east and west of Third Street. On Third Street, new land uses would include increased density residential above ground-floor retail and, where appropriate, above ground-floor commercial and light and medium PDR on in-fill sites or where redevelopment tools would encourage such uses. Transit-oriented pedestrian and streetscape improvements, focused in the Town Center, would be implemented on Third Street to stimulate economic revitalization of the Third Street commercial core. Implementation of land use and zoning changes would foster buffer zones to provide a transition among industrial, mixed use and residential development.

Implementation of the Project would change the existing low-scale industrial and neighborhood retail land use character by introducing more intense, mixed-use housing development. Along the Third Street corridor, a total of 3,000 new residential units could be accommodated. New multi- and single-family residential neighborhoods would be created in the Town Center (450 units), Northern Gateway (750 units), Health Center (1,200 units) and South Basin (600 units) Activity Nodes. New mixed-use residential structures could vary in height from four- to six-stories, as appropriate in proximity to a light rail station. These new higher-density neighborhoods would be a substantial change from existing low-scale, one- to two-story commercial and industrial uses that currently occupy Third Street. This change would be especially pronounced in the Health Center Activity node where several blocks of existing industrial and vacant parcels could be replaced with higher density residential mixed with health services and senior facilities ranging in height from four to six stories.

In addition to increased housing development, new cultural, educational and institutional uses would be encouraged on Third Street in the Town Center Activity Node in the vicinity of the Bayview Opera House. New medical and health services related to existing health and senior services would be encouraged in the Health Center Activity Node.

New local serving, neighborhood retail and commercial use would be emphasized on Third Street in the Northern Gateway, Town Center and Health Center Activity Nodes to serve the increased residential population. Neighborhood serving uses in the Town Center Activity Node would be supported by the Third Street LRT improvements in the commercial core between Thomas and McKinnon Avenues.

In addition, the Bayview Connections Urban Open Space project would enhance proposed land use changes and Economic Development Program activities in the Town Center Activity Node. This project would support the Project goals for the commercial core, by providing physical improvements to increase foot traffic, outdoor seating for business, and small kiosks and other micro-business opportunities on Third Street between Oakdale and Palou Avenues and on Oakdale between Third and Phelps.

The effect of these land use changes on Third Street would be an incremental reduction of industrial uses and activities on properties fronting certain segments of Third Street as new development occurs. By 2025, the appearance and character of the industrial segments of Third Street would change from large lot, low density industrial and institutional uses to more intense transit-oriented, mixed-use residential/commercial/PDR development. Local-serving retail and PDR uses would continue to occupy ground floor uses, but would be integrated into structures containing residential units, commercial, health services and light and medium PDR uses. These new retail uses would also be oriented to a higher density residential population that would be transit accessible, replacing or enhancing the existing quality and mix of retail uses that currently exist. Light and medium PDR uses would be encouraged which would replace the existing variety of industrial uses on Third Street, thereby encouraging types of industrial activities that are more compatible with residential and mixed use activities. Existing industrial uses that could be replaced by residential mixed-use include auto repair and parts businesses, leather refinishing, moving and storage companies, and existing vacant

industrial buildings such as the Coca Cola Plant and Macy's warehouses that are currently proposed for multi-family, mixed-use residential projects.

The mix and intensity of development that could occur in the Third Street corridor could result in indirect land use effects including increased demand and competition for available parking among residential, retail and institutional uses; residential compatibility with vehicular traffic and transit operations on Third Street; nighttime lighting effects on residential uses; noise compatibility among new and existing residential uses with PDR uses and Third Street traffic; and increased demand for police, fire protection and educational services, recreation facilities, and open space. These topics are addressed, respectively, in Sections III. D. Transportation and Circulation; E. Urban Design and Visual Quality; I. Noise; and O. Public Services and Utilities.

Other Project Area Land Use Changes

Outside of the Third Street corridor, the existing industrial land use character would be mostly preserved with the exception of heavy industrial uses, which would be constrained to the area of the sewage treatment facility. Notably, the PDR designations would preserve and protect PDR land uses as residential and offices uses would not be permitted. In the northern portion of the Project Area, mostly Core PDR uses would be encouraged west and east of Third Street in the Oakinba and Northern Gateway Activity Nodes which would preserve and continue the existing industrial land use character in these areas. Large-scale retail and PDR uses would be allowed along Bayshore Boulevard which would permit a continuation of similar large-scale, freeway oriented regional commercial uses which presently exist in this area. In the South Basin Activity Node, existing industrial uses would be preserved, however, bands of light PDR uses would be introduced to attempt to reduce existing industrial/residential "edge" conflicts that presently occur in this area. Essentially, in these portions of the Project Area, there would be no substantial change in industrial land use patterns, except for the removal of heavy industrial uses in the area, and the creation of new buffer zones to minimize industrial/residential conflicts.

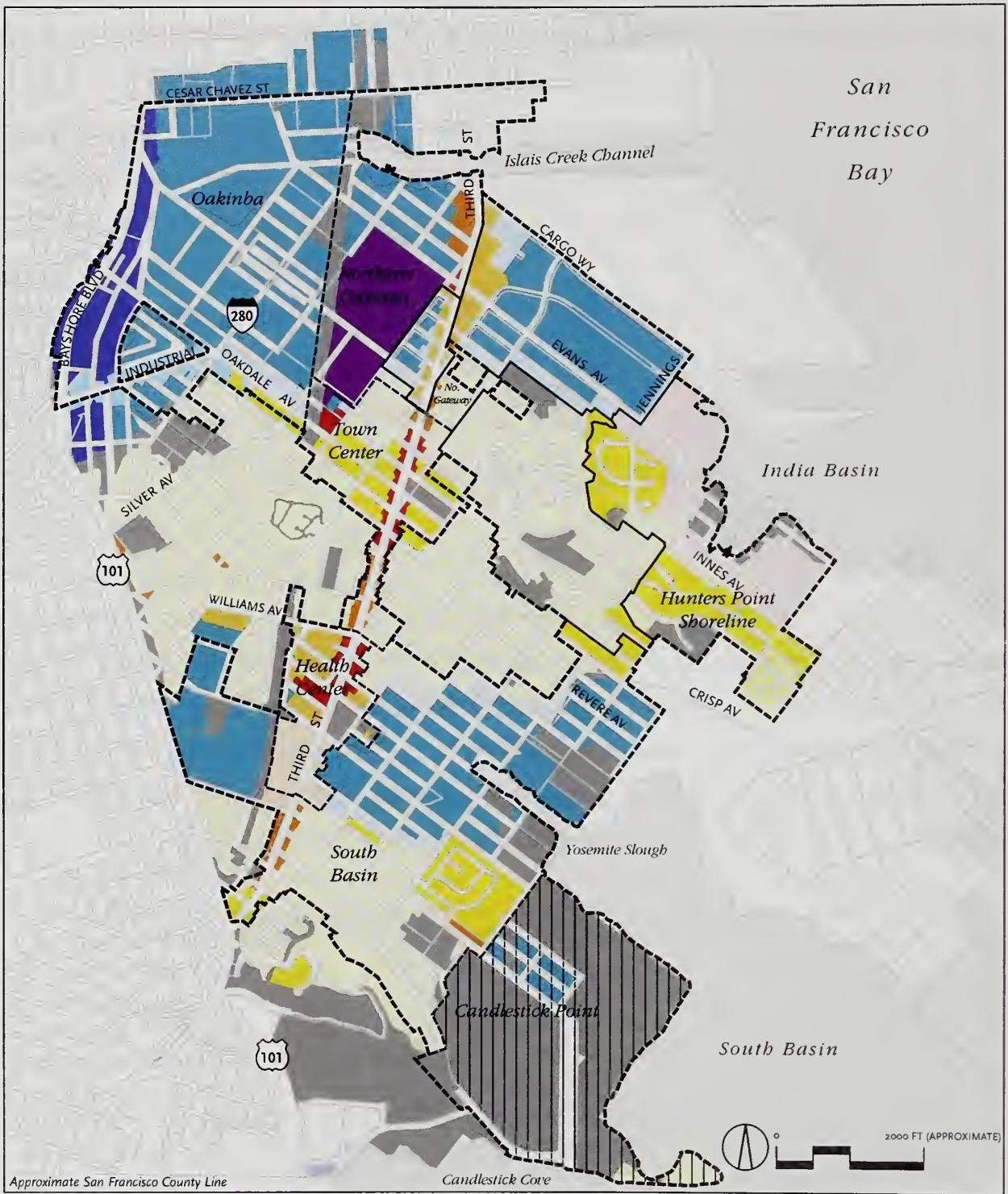
In the eastern portion of the project area, a new mixed use residential community would be developed in the Hunters Point Shoreline Activity Node on infill development sites along Innes Avenue. This new residential enclave would replace a mixture of neighborhood commercial uses (i.e., corner stores and small eating establishments) and established, older heavy industrial uses with 700 housing units, mixed-use development and shoreline open space. The land use character of this area would change noticeably with the introduction of new, residential development, mixed-use commercial, PDR uses, and shoreline open space. While some existing local retail establishments could remain, heavy industrial uses and activities would be eliminated over time, as proposed new uses are developed.

PROPOSED ZONING AND HEIGHT CHANGES

Zoning

Proposed rezoning within the Project Area would create new zoning districts; however, the existing land use classifications and height limits would be largely retained. The Agency and Planning Department are currently formulating Planning Code requirements for the proposed zoning classifications. Figure III.B-4 shows the proposed zoning for the Project Area, including amendments to land use designations within the Bayview Industrial Triangle and India Basin Industrial Park project areas. Major zoning changes would include the following.

- Except for the Third Street corridor, the majority of all existing Heavy Industrial (M-2) and Light Industrial (M-1) zoning throughout the Project Area would be converted to Core PDR, except for the areas noted below. This includes existing M-1 and M-2 zoning districts in the Oakinba, Northern Gateway, Health Center and South Basin Activity Nodes. The Core PDR designation would permit industrial uses such as warehousing, light manufacturing plants, large-scale distribution centers, and a variety of other businesses such as small graphic design studios. Non-industrial commercial activities over 5,000 sf would not be permitted unless it is accessory to a PDR activity on the site. The Core PDR zoning designation would not permit residential uses, thereby preserving and protecting most existing industrially zoned land for future industrial development.
- Within the Third Street corridor, existing M-1 and M-2 zoning on Third Street in the Northern Gateway, Health Center, and South Basin Activity Nodes would be converted to residential mixed-use neighborhood commercial districts that would include Neighborhood Commercial Transit, Neighborhood Commercial Moderate Scale, and Neighborhood PDR/Residential zoning. These districts would accommodate Light



SOURCE: San Francisco Planning Department, 2003; San Francisco Redevelopment Agency, 2004

10-12-04

Single Use Districts	PDR Mixed w/Commercial	Residential Mixed w/Commercial and PDR	Public and Open space
Redevelopment Project Areas	PDR/Lg Commercial	Neighborhood Commercial—transit	Public
Activity Node Boundary	Core PDR	Neighborhood Commercial—moderate	
	PDR/Med Commercial	Residential/Commercial	
	Light PDR	Residential/PDR	
	Candlestick Point Special Use District	India Basin Special Use District	

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FIGURE III.B-4 PROPOSED ZONING DESIGNATIONS

PDR and in some cases, Medium PDR and Medical/Educational uses. Small-scale retail and offices (less than 5,000 sf), entertainment uses, and community facilities would be also permitted. This change in zoning would eliminate future development of heavy industrial uses in these areas, while providing for mixed use with light and medium PDR uses such as graphic design firms, and auto, appliance and furniture repair shops which tend to be more compatible with residential and commercial mixed-use activities.

- Existing Neighborhood Commercial (NC-3) zoning along Third Street in the Town Center and the southern end of the South Basin Activity Nodes would change to Neighborhood Commercial Transit (NC-T) and Residential Commercial-Moderate Scale (RC-M) zoning. Medical and Education Institutions would be permitted in the Neighborhood Commercial Transit District, but would require conditional use authorization in the Neighborhood Commercial district. Light PDR uses would be permitted in the NC-T district. In the NC-T district, parking requirements would be amended to allow more space for housing and stores that would contribute to the revitalization of the Third Street and take advantage of the transit, streetscape and pedestrian improvements provided by the Third Street LRT and Bayview Connections projects. These changes in zoning would result in a gradual transition from existing low-scale neighborhood commercial uses to more intense, transit-oriented development, particularly in the Town Center.
- In the Oakinba Activity Node PDR/Large Commercial would replace existing M-1 zoning along the Bayshore Boulevard corridor to accommodate retail uses of 40,000 sf or more with a conditional use permit. This zoning designation would allow large-scale retail uses similar to those that already exist in this corridor and would not alter existing land uses in this area. Historically, large-scale retail uses have located along Bayshore Boulevard to take advantage of nearby convenient freeway access to I-280 and US 101 to serve local as well as sub-regional customer bases.
- A special use district would replace the existing M-1 zoning district and Small-Scale Neighborhood Commercial (NC-2) zoning in the Hunters Point Shoreline Activity Node to permit mixed-uses and community-oriented uses in the industrial area. This change would convert existing land, zoned for local commercial and heavy industrial uses, to mixed uses, including residential and some PDR space. Historically, this area has been devoted to a broad mix of older, heavy industrial uses that are not compatible with housing or mixed use development. With the zoning change and special use district designation, heavy industrial uses would be eliminated over time, and replaced with residential mixed-use development, and light and medium PDR uses that would be compatible with mixed-use development.

Height Limits

Height limits would remain largely unchanged, except for a possible increase of the existing 40-foot height limit to a range of 55 to 65 feet on Third Street. Height limits would vary

along the length of the Third Street corridor. Existing development within the Project Area is primarily low-rise (1 to 2 stories) and not built up to existing height limits. Implementation of the Project and rezoning would encourage medium-scale development (4-6 stories). The Project would be expected to increase the scale of development in the Project Area, however new development would be within existing height limits, except as noted above on Third Street.

LAND USE EFFECTS

The Project would change the existing land use character of BVHP. The Project is intended to encourage new development of more intensive land uses within the Project Area. As such, changes in land use character would be expected to occur.

The industrial base in the northern and southern portions of the Project Area would be largely retained, and the Project would preserve and protect approximately 484 acres of existing industrial areas for existing and future industrial uses, thereby helping to continue BVHP's role as the City's primary industrial base (Table III.B-3). The Project would transform Third Street into a moderate density, transit-oriented mixed-use residential corridor. New mixed-use residential development would replace existing heavy industrial uses and vacant parcels on Third Street and in the Hunters Point Shoreline Activity Node, resulting in a permanent loss of approximately 157 acres of existing industrial space. While Third Street will still accommodate a small amount of light and medium PDR uses, heavy industrial activities in these areas would be gradually eliminated over time, as new residential mixed use development is built. Except for established single-family residential neighborhoods, most of BVHP's existing land use and zoning are industrial. Therefore, some amount of new development would be expected to occur on existing industrial land with implementation of the Project.

Land use changes resulting from the Project would be consistent with redevelopment goals to eliminate economic and physical blight within the Project Area, the land use vision, goals and recommendations of the Bayview Hunters Point community,⁸ and citywide goals to increase housing supply, particularly affordable housing. The Project would generally change existing

land use in BVHP to create development nodes that locate and concentrate new development in appropriate locations, and to establish buffer zones that would avoid conflicts among existing and new residential, industrial and mixed-use development.

Although major changes in land use patterns would result from the Project, these changes would not result in a significant adverse impact on land use character in BVHP, based on the analysis above. None of the proposed zoning changes, and resulting land use changes, would physically divide an established community or adversely change the character of an established community. The Project would not have a significant adverse impact on land use.

CUMULATIVE DEVELOPMENT

By the year 2025, the following other major land use changes would be expected to occur in or near Bayview Hunters Point.

Growth Outside the Project Area

In addition to the 3,700 units of housing and 2.4 million sf of net new development expected with the Project. Other growth would include an additional 722 units of housing and an additional 1.6 million sf of commercial development in Bayview Hunters Point outside of the Project Area boundaries.⁹

Port of San Francisco

The Port has identified the Pier 90-94 Backlands site, east of Cargo Way, for development. The Port plans to develop about 1.2 million sf of warehouse space for maritime cargo storage and operation, and other Port-related facilities on this 31-acre site. The Project would also include shoreline open space, public access, and wharf improvements.

Hunters Point Shipyard

Lennar/BVHP and the Agency entered into a Disposition and Development Agreement (DDA) for Phase 1 development of the Hunters Point Shipyard. By 2025, under Phase I, the Shipyard is projected to contain about 300,000 sf of commercial/retail space, 1,600 residential units, six

acres of community facilities, and about 34 acres of recreation and open space area. Much of the Hunters Point Shipyard is proposed to be developed for industrial uses in later phases.

Other Residential Development

A number of residential and mixed-use residential/retail projects under formal review with the Planning Department have been approved or are in the Third Street corridor in the Project Area. Proposed development would total approximately 680 affordable and market-rate units, and 28,000 sf of retail space.¹⁰ Approximately 65 affordable units and 3,000 sf of retail space would be developed in the Town Center Activity Node, 418 units of senior and market-rate units with 25,000 sf in the Health Center Activity Node, and 198 market-rate units in the South Basin Activity Node. These units are already accounted for in the 3,700 total residential units considered in this EIR for the Project. They are discussed separately because they could be developed under existing zoning without implementation of the BVHP Redevelopment Plan. These projects would have residential land use impacts similar to those described for the Project.

Cumulatively, proposed development in the vicinity of the Project Area would develop uses consistent with those expected for the Project. As such, these developments, in combination within the Project, would contribute to changing BVHP into a mixed-use residential community along the Third Street corridor, with large-scale industrial and PDR uses located in the northern and southern central parts of the community. Cumulatively these changes would not be considered a significant adverse impact on land use.

Land Use and Zoning Changes Outside of the Project Area

As described on pp. II-21 and 22 of the Project Description, this EIR considers the Eastern Neighborhood Rezoning proposal for Bayview Hunters Point, which includes areas outside of the areas proposed for redevelopment. Future land use conditions in these areas would be governed by the proposed Eastern Neighborhoods rezoning process.

As shown on Figure III.B-1, the remainder areas are located west of Third Street, and primarily consist of established, single-family residential uses. Other major uses include the

Apparel Mart, a triangular group of properties located between Bayshore Boulevard, Oakdale Avenue and Industrial Way within the Oakinba Activity Node, and the Executive Park mixed-use commercial and office development located west of the Candlestick Point Activity Node. Several park and open space uses are located outside the Project Area including the Silver Terrace Playground, Bayview Park, located south of Jamestown Avenue, and portions of the Candlestick Point Recreation Area at Candlestick Cove.

Permitted land uses in these areas would be largely unchanged, although land use designations would be reclassified. Figure III.B-4 shows proposed rezoning for these areas under Eastern Neighborhoods Rezoning Option C. The Apparel Mart area would be changed from M-1 Light Industrial to Core PDRzoning, which permits manufacturing and distribution uses similar to those that currently exist at the Apparel Mart.

The proposed rezoning for these areas would not alter existing land uses permitted under existing zoning, and, therefore, would not result in a significant adverse impact on the character of these areas, nor would it divide or disrupt an established community. The proposed activity nodes were formulated by the Agency and BVHP community members in consideration of existing surrounding land uses outside of the Project Area. For the reasons outlined above, the Project would be consistent with existing surrounding land uses.

EASTERN NEIGHBORHOODS REZONING OPTIONS

The Eastern Neighborhoods Rezoning process is currently considering three rezoning options for each of the four Eastern Neighborhoods, including BVHP. The Project generally reflects Option C: High Housing, which provides a zoning pattern that would support the level of development proposed in the Redevelopment Plan but does not, by itself, generate specific development projects. The Planning Commission's consideration of the rezoning options for each neighborhood will ultimately refine the options presented, or develop new ones. While the Eastern Neighborhoods Rezoning will be subject to separate environmental review, this EIR specifically evaluates rezoning of the BVHP portion of the Eastern Neighborhoods, including the Project Area.

EFFECTS ON FUTURE SUPPLY OF LAND AVAILABLE FOR PDR ACTIVITIES

As shown in Table III.B-3, the Project would convert about 682 acres of land formerly zoned M-1 and M-2 in BVHP to PDR, neighborhood commercial, residential, and mixed-use zoning designations. This total accounts for land that would be rezoned, and does not consider land already occupied by existing non-PDR uses. Therefore, all of the 682 acres would not necessarily be available for PDR uses, as existing non-industrial uses allowed in the M districts would still exist. (The Planning Department estimates that land occupied by other uses in PDR zoning districts in BVHP is roughly 144 acres under rezoning Option C.)¹¹

Under Option C, about 68 percent, or 462 acres of the total land currently zoned M-1 and M-2 would be zoned Core PDR; 248 acres would be zoned PDR Light, PDR/Commercial and PDR/Large Retail uses; and 17 acres would be PDR/Residential. The rezoning would convert 462 acres now zoned M-1 or M-2 to Core PDR, which would not permit residential, major commercial (over 5,000 sf), or medical and educational facilities. This would protect land almost exclusively available for PDR activities from encroachment and competition from other types of uses.

With the Project, approximately 84 acres of industrially zoned land would be converted to non-industrial zoning classifications such as residential, mixed use, and neighborhood commercial/transit. These uses are encouraged in the Citywide Action Plan, particularly the location of housing along transit corridors and an increase in the supply of affordable housing.

The potential loss of capacity to accommodate future PDR uses is discussed below in the context of the Eastern Neighborhoods and City as a whole, and in the context of the BVHP community.

Eastern Neighborhoods/Citywide Context

The 84 acres of industrially zoned land converted with the Project represents about 12 percent of the remaining 800 acres of industrial land in the Eastern Neighborhoods. In theory, conversion of 84 acres of industrial land to non-industrial uses could mean the *potential* loss of 2 million square feet of space to accommodate future PDR uses in the City.¹² This would be

equivalent to about 4,000 PDR jobs.¹³ The project includes 425,000 sf of net new PDR space because of existing capacity within industrially-zoned land.

Any potential loss of industrial land, however, would affect the viability of future PDR uses in the City, for several reasons: Existing PDR clusters may be fragmented, and the ability to increase the density of PDR uses to provide more space for PDR uses on a limited supply of land would be constrained. There would be increased pressure to find space for PDR activities in the City when, over the past decade, the supply of available industrially zoned land decreased in the Eastern Neighborhoods and citywide.

BVHP Context

The Project would be consistent with the four main goals of the Eastern Neighborhoods Rezoning by reflecting the local values of BVHP for fostering economic revitalization; increasing housing supply, particularly affordable housing; maintaining a large share of the industrial land supply; and improving the quality of future development by eliminating M-1 and M-2 zoning throughout the community. Section II, Project Description, p. II-8 describes Eastern Neighborhood planning goals.

The Project would retain more land for PDR activities than any other neighborhood under Eastern Neighborhoods Rezoning Option C. South of Market, Showplace Square/Potrero Hill/Central Waterfront, and the Mission District each would have a net loss in PDR space, resulting in a total loss of about 12,800 jobs for the Eastern Neighborhoods as a whole. BVHP would be the only neighborhood that would retain additional capacity for PDR activities, with Rezoning Option C.¹⁴ It should be noted that BVHP is less land constrained than the other Eastern Neighborhood communities, and has an entrenched historical role as the City's industrial base. Nonetheless, the BVHP community and the project redevelopment are seeking to diversify the image of BVHP to include other uses.

TABLE III.B-3
BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN INDUSTRIAL
LAND REZONING OPTION C
FORMER M-1 AND M-2 DISTRICT ZONING (ACRES)

Zoning District Reclassifications	Number of Parcels	Total SF	Total Acres
Production/Distribution/Repair			
Core PDR	672	20,123,261	462
PDR Light	105	971,626	22
Sub-Total	777	21,094,887	484
Mixed PDR Districts			
PDR / Commercial	19	391,664	9
PDR / Large Retail	124	1,737,438	40
PDR / Residential	<u>17</u>	<u>709,937</u>	<u>16</u>
Sub-Total	160	2,839,039	65
Total PDR	937	23,933,926	549
India Basin SUD	29	1,680,189	39
Mixed Use Residential - Neighborhood Commercial			
Neighborhood Commercial Transit	68	563,900	13
Neighborhood Commercial - Moderate Scale)	<u>7</u>	<u>584,062</u>	<u>13</u>
Total Neighborhood Commercial	75	1,147,962	26
Residential			
Residential / Commercial	80	806,860	19
Low Density Residential	<u>239</u>	<u>422,789</u>	<u>9</u>
Total Residential	319	1,229,649	28
Right-of-Way	<u>65</u>	<u>1,764,475</u>	<u>41</u>
TOTAL All Zoning Districts	1,425	29,756,201	683

Source: San Francisco Redevelopment Agency Planning Department, July 2004

As discussed in Section III.A, Plans and Policies, p. III.A-14, BVHP has a disproportionate share of industrial and polluting facilities in comparison to the rest of the City. With the Eastern Neighborhoods rezoning, the majority of the City's industrial space would continue to be located in BVHP. However, because land currently zoned M-1 and M-2 would be

converted to PDR zoning designations, industrial uses would be expected to be more compatible with existing and planned residential, neighborhood commercial, and open space uses. By definition, PDR zoning, including PDR mixed use, excludes heavy industrial activities and would reduce, eliminate, or buffer much of the land use conflicts and nuisances that have historically occurred in BVHP.

FUTURE DEMAND FOR PDR SPACE

The Eastern Neighborhoods Rezoning also considers future use of land to accommodate future demand for PDR activities. The Association of Bay Area Governments (ABAG) regional model was used to forecast future jobs to then estimate the amount of floor area that would be needed in the Eastern Neighborhoods to accommodate future PDR growth. Citywide, ABAG forecasts a growth of about 18,000 total PDR jobs between 2000 and 2025 that would require about 215 additional acres to accommodate PDR activities. Under rezoning Option C, all of the four Eastern Neighborhoods, including BVHP, would reduce total land use capacity for roughly 12,800 PDR jobs or 6.6 million sf of PDR space by 2025.¹⁵ Although there would be a reduction in PDR land capacity in the Eastern Neighborhoods as a whole, BVHP (including the Redevelopment Project Area) would be the only neighborhood to create capacity for roughly 1,700 jobs (884,000 sf) under Rezoning Option C by 2025.¹⁶ This does not account for potential additional PDR space on land that is not publicly zoned by the City and County of San Francisco, which includes Port lands and the Hunters Point Shipyard.

In the City as a whole, PDR space is being reduced. Consequently, in the near future, San Francisco will not be able to accommodate the 18,000 new PDR jobs that ABAG originally forecast for the City between 2000 and 2025. As a result, any loss of existing PDR space in the City is a major land use policy consideration to be balanced with the respective land use and community goals of each community in the Eastern Neighborhoods, and citywide goals to increase the supply of housing, particularly affordable housing. With a further loss of PDR jobs and activities in the City, new firms could seek locations elsewhere, or existing firms that wanted to expand could be forced to relocate outside of San Francisco. The citywide effects of the loss or relocation of PDR activates outside of the city are described in the following section.

Indirect Effects of Loss of PDR Activities

PDR businesses are considered vital to the City's economy. They are typically less vulnerable to economic "boom and bust" cycles, because PDR goods and services are intertwined with multiple sectors of the San Francisco economy. An example is the tourism/visitor sector, including hotels, restaurants, and transportation services which in turn depends on warehousing, vehicle service, and wholesale supplies in the PDR sector. PDR activities also play an important role in maintaining San Francisco's presence as a center of the region for certain aspects of the city's culture, such as a culinary center and a design hub, both of which are dependent on PDR businesses.

The delivery of goods and services would cost more and take more time. San Francisco's economy would continue to lose its diversity, becoming almost exclusively a professional service and tourist-based economy, and thus lose some of the resiliency it has shown in the past to weather economic cycles. Transportation costs would involve an increase in traffic and congestion (with associated air quality effects) at the bridges and freeway approaches to the City, as some of the necessary services and goods would be imported from outside the city. It should be noted that goods and services are already imported from outside of the City to service and supply San Francisco businesses; this would further increase with the loss of PDR activities in the City.

The Eastern Neighborhoods have experienced a total loss of land available for PDR activities; however, the Project would retain about 462 acres of land for PDR, so that BVHP would continue to provide the majority of the City's industrial land. Nevertheless, the long term effects of the loss and future shortage of land available for PDR uses in the City cannot be determined based solely on these effects in the BVHP neighborhood, and will be evaluated for the Eastern Neighborhoods and City as a whole as part of the environmental review for the Eastern Neighborhoods rezoning.

NOTES – *Land Use and Zoning*

- ¹ The Hunters Point Power Plant is planned for full closure in 2005 pending the upgrade of the Potrero Mirant power plant to provide electrical energy needs for the City.
- ² The discussion of land use patterns in the Eastern Neighborhoods is derived largely from the San Francisco Planning Department, Profiles of Community Planning Areas: San Francisco's Eastern Neighborhoods, 2002, pp. 23-28.
- ³ Geographically, the Eastern Neighborhoods also includes development programmed for Mission Bay, the Central Waterfront, the Hunters Point Shipyard, Port lands, and planned development in Visitacion Valley; these developments are not included in the rezoning effort.
- ⁴ Detailed descriptions of PDR businesses and activities are described in the following Planning Department reports: Profiles of Community Planning Area, San Francisco's Eastern Neighborhoods, January 2002; Industrial Land in San Francisco, Understanding Production, Distribution and Repair, July 2002; and San Francisco Land Use Survey, 1998.
- ⁵ Light PDR uses are allowed primarily in existing Neighborhood Commercial (NC), Residential Commercial (RC), and Commercial (C) districts.
- ⁶ Based on extensive land use surveys and research conducted by the Planning Department, 1999 Interim Controls divided industrial land into 1,200 acres for PDR Industrial Protection Zones (IPZs) and 450 acres for residential and commercial use Mixed Use Housing Zone (MUHZ).
The 1,200 acres of IPZ land designated in the interim controls were not completely available for core and medium PDR businesses since about one third of this land was already used for residential, commercial, and some heavy industrial uses, including large public infrastructure facilities such as the Hunters Point Power Plant and Southeast Sewage Treatment Control Plant. These non-PDR uses add up to about 400 acres of land, leaving about 800 acres available for future PDR uses. Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook – First Draft, February 2003; p. 10.
- ⁷ The total additional square footage of residential development has not been estimated. Based on an average of 850 sf per unit, residential uses would total 3.4 million sf. This is a conservative estimate as 44 percent of the units would be expected to contain two to four bedrooms.
- ⁸ Bayview Hunters Point Community Revitalization Concept Plan, March 2002.
- ⁹ The transportation model and employment, population and housing analyses include a Study Area that is larger than the Redevelopment Project Area. This growth is included in this larger Study Area, outside of the Redevelopment Project Area.
- ¹⁰ These projects include 4800 Oakdale Avenue (15 units and 3,000 sf of retail); 4601 Third (50 units); 5600 Thirs Street (128 units and 10,000 sf of retail); 5800 Third Street (290 units and 15,000 sf of retail); and 833 Jamestown Avenue (198 units). San Francisco Redevelopment Agency, May 2004.
- ¹¹ Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook, Appendix B, p. 122, Planning Department.
- ¹² 84 acres at 55% coverage is about 2 million sf of development potential.
- ¹³ PDR employment is equal to 437 sf per job. Two million square feet equals 4,577 jobs.
- ¹⁴ Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook, p. 91.
- ¹⁵ Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook, p. 91.
- ¹⁶ Within the Project Area, land use allocation for the capacity of future PDR space is based on a more thorough and refined analysis conducted by the Agency and Planning Department for use in the transportation model and analysis. San Francisco Redevelopment Agency, Tom Evans, Bayview Hunters Point Redevelopment Project Numbers Memo, October 29, 2003. For consistency with the Planning Department assumptions, a PDR employment factor 520 sf/employee was used to estimate PDR employment.



C. EMPLOYMENT, HOUSING, AND POPULATION

SETTING

This section describes current employment, population, and housing characteristics in Bayview Hunters Point. Information sources include the Association of Bay Area Governments (ABAG)'s Projections 2002, the 2000 United States Census, and a project-specific technical report prepared by Mundie & Associates (2004). Information concerning added jobs and residents presented in this section is used to evaluate physical impacts on the environment that are considered in other Section III topics, such as transportation, air quality, noise, and growth inducement.

EMPLOYMENT

San Francisco Metropolitan Area

The Project Area is located in the City and County of San Francisco, which is part of a larger metropolitan area. The U.S. Census defines the San Francisco Primary Metropolitan Statistical Area (PMSA) to include San Francisco, San Mateo, and Marin Counties. Employment in this PMSA was estimated by ABAG to total 1,153,280 jobs in 2000. ABAG's *Projections 2002* forecasts that this total will grow to 1,435,760 by the year 2025.

City and County of San Francisco

Employment in the City and County of San Francisco was estimated by ABAG to total 634,430 jobs in 2000. ABAG's *Projections 2002* anticipate that total employment in San Francisco will grow by nearly 136,070 jobs, to 770,500, by the year 2025.

Bayview Hunters Point Study Area

The San Francisco Planning Department citywide population, housing, and employment estimates are based on ABAG estimates. The citywide total is disaggregated to traffic analysis zones (TAZs). For this discussion of employment, population, and housing, the Study Area

comprises 26 TAZs that are located wholly or partly south of Cesar Chavez Street, east of Bayshore Boulevard, and north of the San Mateo County line, with the exception of the TAZ that contains the Shipyard.¹ The Project Area and the Study Area defined for this analysis are compared in Figure III.C-1. The Study Area is larger than the Project Area.

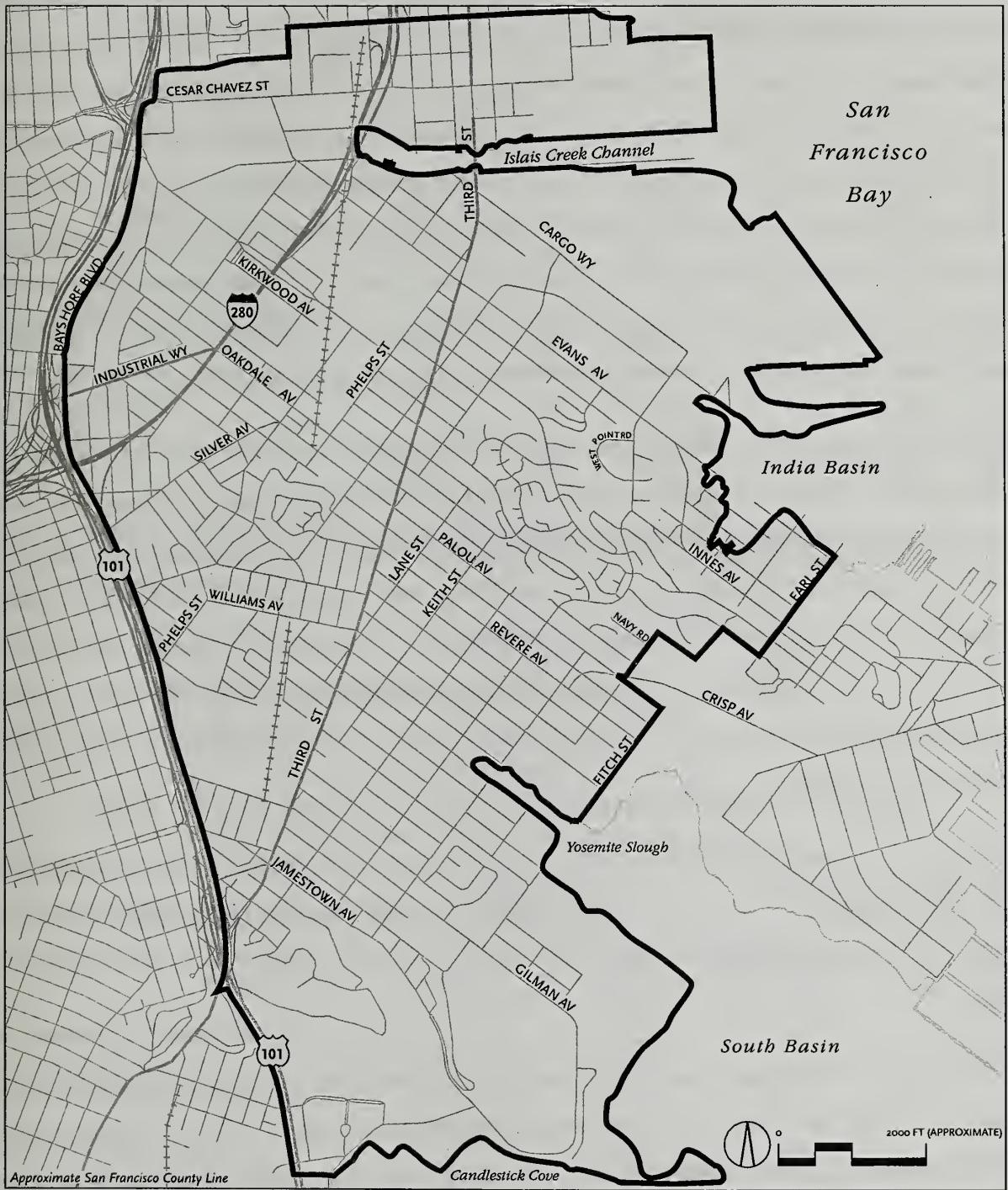
The Planning Department estimates 2000 employment in the Study Area at 33,072 jobs. The distribution of those jobs by sector is presented in Table III.C-1. The distribution reflects the area's legacy of more than 500 diverse employment uses – heavy and light industrial, retail, and commercial – with an emphasis on industrial activities. The greatest number of Study Area jobs – 20,441, or 61.8 percent of the total – is in production, distribution, and repair (PDR) activities. Other sectors with more than 10 percent of all jobs are management and information professional services (MIPS), with 6,732 jobs (20.4 percent) and retail and entertainment (RET), with 3,416 jobs (10.3 percent). The Study Area has a lower percentage of jobs than the City as a whole in every sector but PDR. While the Study Area accounts for 5.2 percent of all city jobs, it accounts for more than 21.4 percent of all PDR jobs.

TABLE III.C-1
STUDY AREA EMPLOYMENT BY INDUSTRY, 2000

Industry	Study Area		City		Study Area Jobs as Percent of Citywide Jobs
	Jobs by Industry	Percent of Total Jobs	Jobs by Industry	Percent of Total Jobs	
Cultural/Institutional/Educational	2,365	7.2%	90,116	14.2%	2.6%
Medical and Health Services	92	0.3%	40,192	6.3%	0.2%
Management and Information Professional Services	6,732	20.4%	291,574	46.0%	2.3%
Production, Distribution, Repair	20,441	61.8%	95,547	15.1%	21.4%
Retail and Entertainment	3,416	10.3%	96,605	15.2%	3.5%
Visitor Lodging	26	0.1%	20,323	3.2%	0.1%
TOTAL	33,072	100.0%	634,435	100.0%	5.2%

Source: San Francisco Planning Department, 2004.

Note: Detail and totals may not agree because of independent rounding.



SOURCE: Clement Designs after San Francisco Redevelopment Agency

10-8-04

Bayview Hunters Point Redevelopment Plan EIR
FIGURE III.C-1 EMPLOYMENT, POPULATION AND HOUSING STUDY AREA

Future changes in the Study Area, including a new link with the citywide and regional transportation network via the Third Street LRT (completion expected 2005) and other planned improvements, will add to that existing employment base, as the area shares in the growth of the City. Capacity for growth is present along this corridor in the form of undeveloped and underdeveloped sites and buildings. With favorable market conditions, the growth described under the Base Case (no Bayview Hunters Point Redevelopment Projects and Rezoning) will be realized. By 2025, under the Base Case, the Study Area is expected to gain approximately 5,300 jobs, yielding a total of approximately 38,380 jobs. This is an increase of 16 percent, as compared with a citywide employment increase projected at 20 percent.

Tables III.C-2 and III.C-3 consider the 2000-to-2025 change under the Base Case Scenario in greater detail. Table III.C-2 shows that, over the forecast period under the Base Case, Study Area employment is expected to grow more slowly than the City as a whole. Only the PDR sector is expected to grow more rapidly in the Study Area than in the City as a whole, with an increase of nearly 16 percent (compared to eight percent citywide). About 60 percent of the Study Area's new jobs between 2000 and 2025 are projected to be in the PDR sector. Other substantial growth would occur in the MIPS sector, which would gain about 1,340 jobs (nearly a 20 percent increase).

Table III.C-3 illustrates the Study Area's share of citywide employment increase under the Base Case Scenario. Overall, the Study Area would add approximately 3,200 PDR jobs, which would account for approximately 23 percent of the citywide jobs in this employment sector.

As illustrated in the tables below, PDR jobs are projected to be a driving force in Study Area growth. In 2000, the Study Area had about 21 percent of the City's PDR jobs; under the Base Case projection, by 2025 it will have approximately 23 percent. New PDR jobs in the Study Area (+3,190) are projected to comprise over 40 percent of the new in PDR jobs citywide (+7,767), even though the Study Area is expected to gain only four percent of all new jobs citywide.²

TABLE III.C-2
CHANGE IN STUDY AREA AND CITYWIDE EMPLOYMENT
BY INDUSTRY (BASE CASE)

Industry	Study Area			City		
	2025	Increase from 2000	Percent Increase 2000-2025	2025	Increase from 2000	Percent Increase 2000-2025
Cultural/Institutional/Educational	2,732	367	15.5%	105,947	15,831	17.6%
Medical and Health Services	107	15	16.3%	47,217	7,025	17.5%
Management and Information Professional Services	8,070	1,338	19.9%	363,024	71,450	24.5%
Production, Distribution, Repair	23,631	3,190	15.6%	103,314	7,767	8.1%
Retail and Entertainment	3,814	398	11.7%	119,493	22,888	23.7%
Visitor Lodging	26	0	0.0%	25,156	4,833	23.8%
TOTAL	38,380	5,308	16.0%	763,153	129,794	20.4%

Sources: San Francisco Planning Department, 2004; San Francisco County Transportation Authority, 2004.

Note: Detail and totals may not agree because of independent rounding. Citywide increase from 2000 differs slightly from ABAG increase of 136,070 between 2000 and 2025.

TABLE III.C-3
STUDY AREA'S SHARE OF CITYWIDE EMPLOYMENT INCREASE
BY INDUSTRY, 2000 TO 2025 (BASE CASE)

Industry	Increase in Jobs 2000 to 2025		Study Area's Share of Citywide Jobs		
	Study Area	City	Percent of Total, 2025	Percent of Increase, 2000 - 2025	
Cultural/Institutional/Educational	367	15,831	2.6%	2.3%	
Medical and Health Services	15	7,025	0.2%	0.2%	
Management and Information Professional Services	1,338	71,450	2.2%	1.9%	
Production, Distribution, Repair	3,190	7,767	22.9%	41.1%	
Retail and Entertainment	398	22,888	3.2%	1.7%	
Visitor Lodging	0	4,833	0.1%	0.0%	
TOTAL	5,308	129,794	5.0%	4.1%	

Source: San Francisco County Transportation Authority; Mundie & Associates, 2004.

Note: Detail and totals may not agree because of independent rounding.

EMPLOYED RESIDENTS

San Francisco Metropolitan Area

According to ABAG's *Projections 2002*, the PMSA had a total of nearly 989,000 employed residents in 2000, while ABAG estimated 1,153,280 total jobs in the same area. The surplus of jobs over employed residents indicates that many jobs are held by workers commuting into the area. While some residents of the three-county area may have held second jobs, some also commuted to jobs outside the area. The gap between employed residents and jobs suggests a net in-commute of around 164,300, or about 14 percent of the total jobs.

The same circumstance is forecast by ABAG for 2025: the number of employed residents in the PMSA will grow to 1,109,800 and the job count to 1,435,760 jobs, resulting in a net in-commute of around 325,960, or nearly 23 percent of the total jobs – an increase in the percent of in-commuters as compared with 2000.

City and County of San Francisco

ABAG estimates that San Francisco had 444,851 employed residents in 2000 and 634,430 jobs. These numbers are projected to grow by 2025 to 473,700 and 770,500, respectively.

These figures suggest that 189,580, or 30 percent, of San Francisco jobs were held by in-commuters or were second jobs for City residents in 2000, and that this figure will grow to 296,800 jobs, or 47 percent, by 2025.

Study Area

Table III.C-4 presents estimates of employed residents and jobs in 2000 and 2025 for the Study Area. The Study Area had about 10,107 employed residents in 2000, as compared with the 33,072 jobs (noted previously in Table III.C-1). These numbers are projected to grow by 2025 to 11,376 employed residents and 38,380 jobs, respectively.

TABLE III.C-4
EMPLOYED RESIDENTS AND JOBS IN STUDY AREA,
2000 TO 2025 (BASE CASE)

	Year	
	2000	2025
Employed Residents	10,107	11,376
Jobs	33,072	38,380
Employed Residents as Percent of Jobs	30.6%	29.6%

Source: San Francisco County Transportation Authority; Mundie & Associates, 2004.

In both 2000 and 2025, employed residents of the Study Area could account for about 30 percent of Study Area jobs, with the balance of 70 percent accounted for by in-commuters or (in a low percentage of cases) second jobs.

HOUSING AND POPULATION

San Francisco Metropolitan Area

The 2000 U.S. Census reported the population of the three-county metropolitan area at 1.73 million residents. The majority of this population consisted of households, of which the Census reported 684,450 with a total household population of about 1.69 million.³ The Census reported about 712,100 housing units in 2000. The area-wide vacancy rate was approximately 2.9 percent for year-round housing units.

ABAG's *Projections 2002* forecasts growth in 2025 with nearly 1.91 million residents, with a household population of 1.86 million living in 752,440 households. These figures reflect a projected increase of about 10 percent in population and households.

City and County of San Francisco

The U.S. Census reports 776,200 residents in 2000, with a household population of 756,967 living in 329,700 households. The Census further reports that San Francisco had just over 346,500 housing units in 2000.⁴ Aside from a small number of units held for other than full-time occupancy, the vacancy rate was about 3.8 percent.

ABAG's *Projections 2002* provides the basis for the Base Case forecast of population and household growth to 2025. Specifically, the projections accounted for a household population of 793,900 living in 348,990 households.⁵ These figures reflect a projected increase of about five percent in household population and households. Estimates of citywide household population and number of households in 2000 and projections for 2025 are provided in Table III.C-5.⁶

TABLE III.C-5
STUDY AREA'S SHARE OF CITYWIDE INCREASE IN HOUSEHOLDS
AND HOUSEHOLD POPULATION, 2000 TO 2025 (BASE CASE)

	2000		2025		2000-2025
	TAZ Data	Census Tract Data	Difference: Census Tract Minus TAZ Data	TAZ Data, Change over Study Base Case Period, Base Case	
Study Area					
Households	8,077	9,578	1,501	8,525	448
Household Population	26,249	33,805	7,556	29,064	2,815
Citywide					
Households	329,703	329,700	-3	348,774	19,071
Household Population	756,967	756,976	9	799,208	42,241

Source: TAZ data from San Francisco Planning Department; census tract data from U.S Census, 2000.

Assuming that the vacancy rate for year-round units remains constant at 3.8 percent, the addition of 19,070 households (Base Case projection; see Table III.C-5) between 2000 and 2025 would require the construction of about 19,800 net new housing units during that period of time.

Study Area

The 2000 U.S. Census reports the household population of the 11 census tracts that approximate the Study Area was 33,805 in 2000. These individuals accounted for 9,578 households. The Census counts for the Study Area in 2000 are somewhat higher than the estimates provided by the Planning Department, which in turn were based on citywide estimates provided by ABAG, disaggregated to traffic zones by the Planning Department.

Citywide, differences in households and household population between the ABAG-based TAZ estimates and the Census counts are negligible. Table III.C-5 provides a comparison.

The source of the difference in the two sets of Study Area data is not clear, but may be inherent in the difficulty of developing a current estimate at a time immediately before an enumeration, since the enumeration on which the projection was based (1990 Census) was nearly 10 years old. Because the TAZ estimate is low, the Base Case forecast which derives from it is likely also to be low. In fact, as Table III.C-5 shows, the 2025 Base Case projection is actually lower than the 2000 Census enumeration. The difference between the Census count and the TAZ estimate does not invalidate the TAZ figures, because the underlying modeling – yielding future year estimates of households and household population – remains valid. The difference between the TAZ year 2000 estimates and the 2025 TAZ projections is the basis for estimating the impact of the Project: a sound approach because the data sets are consistent, and it is the change, not the absolute future-year figure, that is relevant to the analysis. If the 2025 figures are to be used to suggest a point estimate, however, an upward adjustment would be appropriate of the scale of the year 2000 difference between the data sets.

Population growth with the Base Case is not anticipated to occur at the same levels as employment growth. It was noted above that, under the Base Case, Study Area employment as a proportion of citywide employment is projected to decrease slightly, from 5.2 percent to 5.0 percent. The Study Area had less than three percent of the City's households and about 3.5 percent of the City's household population according to the year 2000 estimates. Under the Base Case, the change in those proportions would be upward, but very small.

The Census reported about 9,879 housing units in 2000, with a vacancy rate in the Study Area of approximately three percent of all housing units. Assuming that a three percent vacancy rate is maintained, then the area would require about 460 housing units to accommodate the 450 new households under the Base Case. This increase would bring the total number of housing units in the area to 10,340 (about 9,880 in 2000 plus 460 to accommodate added households, holding the vacancy rate constant).

IMPACTS

The impacts on employment, housing, and population discussed in this section would result from implementation of Project. The Study Area is the entire Bayview Hunters Point neighborhood. Impacts are derived from the differences between Base Case and Project conditions in the year 2025.

STANDARDS OF SIGNIFICANCE

The City of San Francisco has no formally adopted standards to evaluate the significance of impacts related to employment growth, housing development, and population growth. As noted in the EIR on the Mission Bay plan:

A project that induces substantial growth or concentration of population generally is not viewed as having a significant impact on the environment, per se. Rather, the effects and significance of this growth are examined under other environmental topics such as transportation, air quality, noise, community services, and growth inducement. The impacts are also considered in the context of local and regional plans and projections dealing with population and employment.⁷

Thus, economic development is not an adverse economic impact, and population growth is not an adverse population impact, but the environmental changes needed to accommodate added jobs and residents may have physical impacts on the environment that are considered in appropriate subject-area sections of this EIR. Growth is also considered in terms of its “fit” within broader area forecasts and plans for the city and the region.

PROGRAM EFFECTS

In general, the Project is considered a “high housing option” plan that would revise land use controls to allow more intensive development of some uses in the area and would change the designations of some parcels to allow for more housing. Through these changes in land use controls and designations, the Project could reduce the potential amount of employment in PDR activities and increase the potential amount of employment in medical and health services (MED) and RET activities (the latter assumes that the proposed Stadium Development Retail/Entertainment Center is built).

Employment

Commercial building space included in the Project (a total of 2.4 million square feet) would accommodate an estimated 5,523 new jobs. The types and amounts of space and the new employment expected to occupy that space are detailed in Table III.C-6.

**TABLE III.C-6
 NEW BUILDING SPACE
 AND EMPLOYMENT BY INDUSTRY, 2000 – 2025***

Industry	Building Space (Sq. Ft.)	Percent of Total	Employment (Jobs)	Percent of Total
Cultural/Institutional/Educational	115,000	4.8%	291	5.3%
Medical and Health Services	50,000	2.1%	127	2.3%
Management and Information Professional Services	220,000	9.1%	606	11.0%
Production, Distribution, Repair	425,000	17.7%	878	15.9%
Retail and Entertainment	1,591,850	66.1%	3,610	65.4%
Visitor Lodging	5,000	0.2%	11	0.2%
TOTAL	2,406,850	100.0%	5,523	100.0%

Source: San Francisco Redevelopment Agency, 2004.

Notes: *Includes only the area within the Project Area boundary.

About half of the total new building space (1.2 million square feet) would be retail/entertainment space in the proposed Stadium Development Retail/Entertainment Center, originally conceived as part of the new football stadium complex intended to replace Candlestick Park. This project concept has not moved forward, however, and its future is unknown. Excluding the Stadium Development Retail/Entertainment Center, the Project would comprise about 392,000 square feet of retail space and about 1.2 million square feet of non-residential building space; the Project would accommodate about 890 retail jobs and about 2,800 total jobs.

In the absence of the Stadium Development Retail/Entertainment Center, the sector with the greatest Project-related increase in building space would be PDR, with 425,000 square feet. Employment in the PDR and RET would be roughly the same, just under 900 jobs. Table III.C-7 depicts the number of new jobs anticipated with implementation of the Project.

TABLE III.C-7
PROJECT-RELATED EMPLOYMENT GROWTH AS A
PERCENT OF TOTAL STUDY AREA EMPLOYMENT GROWTH
BY INDUSTRY, 2000 - 2025

Industry	Study Area Increase			Project-related Increase*	Increase as % of Total Increase
	2000	2025 with Project	Total Increase, 2000-2025		
Cultural/Institutional/Educational	2,365	2,809	444	291	66%
Medical and Health Services	92	220	128	127	99%
Management and Information Professional Services	6,732	8,972	2,240	606	27%
Production, Distribution, Repair	20,441	22,268	1,727	878	48%
Retail and Entertainment	3,416	7,141	3,725	3,610	97%
Visitor Lodging	26	37	11	11	100%
TOTAL	33,072	41,447	8,375	5,523	66%

Source: San Francisco Planning Department; San Francisco County Transportation Authority; Table III.C-6.

Notes: * From Table III.C-6

Table III.C-8 compares the number of new jobs expected with the Project (from Table III.C-7) to the number of new jobs expected with the Base Case (from Table III.C-2). The table indicates that, with the Project, employment in the Study Area would:

- Increase by nearly 60 percent more than it would without the Project, if the Stadium Development Retail/Entertainment Center were built. (Employment growth would be about seven percent greater than with the Base Case in the absence of the Stadium Development Retail/Entertainment Center).
- Account for substantial percentage increases in medical and health services and in retail and entertainment (assuming completion of the Stadium Development Retail/Entertainment Center) compared to the Base Case.
- Account for moderate increase in the numbers of cultural/institutional/educational and management and information professional services jobs compared to the Base Case.
- Account for a slight increase in the numbers of visitor lodging jobs compared to the Base Case.

TABLE III.C-8
STUDY AREA EMPLOYMENT BY INDUSTRY:
INCREASE COMPARED WITH BASE CASE INCREASE, 2000-2025

Industry	New Jobs With Base Case	New Jobs With Project	Increase with Project as Percent of Increase with Base Case
Cultural/Institutional/Educational	367	444	121%
Medical and Health Services	15	128	853%
Management and Information Professional Services	1,338	2,240	167%
Production, Distribution, Repair	3,190	1,827	57%
Retail and Entertainment	398	3,725	963%
Visitor Lodging	0	11	n.a.
TOTAL	5,308	8,375	158%

Source: San Francisco County Transportation Authority, 2004.

The Project, if built out to capacity, would provide about nine times the amount of new employment in the retail and entertainment sector than would otherwise be expected, with about 73 percent of the new employment (2,720 jobs) at the proposed Stadium Development Retail/Entertainment Center in the Candlestick Point Activity Node.

If the proposed Stadium Development Retail/Entertainment Center were built, it could draw sales away from more typical, existing shopping centers in several Bay Area counties. If the center's attraction were great enough, its adverse impacts on those existing centers could be great enough to reduce employment and, in a severe case, increase vacancies to the extent that the future commercial viability of those centers would be threatened. Such a threat is too speculative at this level of analysis for systematic evaluation, however, and would more properly be considered in a project-level EIR on the Stadium Development Retail/Entertainment Center.

Employed Residents

Employment growth in the Study Area is intended, in part, to provide employment opportunities for residents of the area. For a variety of reasons, it is not possible to predict

whether new jobs in the area – whether they would result from the Project or not – would be held by area residents. These reasons include a lack of information about the occupational skills of the area's labor force and of the new jobs, as well as the ease of transportation between the Study Area and other employment-rich areas of San Francisco (facilitated by the construction of the Third Street LRT project).

It is noted that Proposition D, adopted by San Francisco voters in June 1997, requires that 25 percent of the jobs at the Stadium Development Retail/Entertainment Center be held by residents of the Study Area. This requirement would mean that at least 680 workers of the estimated 2,720 workers in the Project would live in the Study Area. Proposition D does not, however, require that the local hires be previously unemployed; therefore, these workers could be employed elsewhere, either within the Study Area or beyond it, prior to taking jobs at the Stadium Development Retail/Entertainment Center. Therefore, this hiring requirement would not necessarily have an impact on the number of employed residents.

Housing

The Third Street corridor includes “many structures that could be renovated or rebuilt to include residential units, even in the absence of zoning changes.”⁸ With the Project, the Study Area is expected to gain approximately 6,146 new housing units.

Table III.C-9 compares the new housing expected with the Project to the new housing expected in the Base Case projections. The Project would accommodate between three and four times as many housing units as are anticipated in the Base Case.

TABLE III.C-9
HOUSING GROWTH AS PERCENT OF
PROJECTED AREAWIDE GROWTH, 2000-2025

Location	With Base		Increase with Project as Percent of Increase with Base
	Case	With Project	
Housing Units	1,718	6,146	358%

Sources: San Francisco Planning Department, 2004; Mundie & Associates, 2004.

Housing Units Assumed in the Transportation Model

The transportation model for the Project anticipates that the number of households in the Study Area will increase from 8,077 in 2000 to 14,223 in 2025, a gain of 6,146. The model did not assume any vacant units. As a result, the number of units expected is the same as the number of households.

Housing Units Required to Accommodate Demand Associated with New Employment

Estimates of housing demand that would be associated with the increase in employment in the Study Area may be derived based on a series of factors. Employment in the Study Area with the Project is estimated to total approximately 8,375 jobs, as shown in Tables III.C-6 and III.C-7. This estimate provides the starting point for the calculation of housing demand.

As noted above, Proposition D requires that the sponsor of the Stadium Development Retail/Entertainment Center make a good faith effort to assure that 25 percent of the permanent jobs on the project site go to residents of the “Bayview-Hunters Point-South Bayshore Community.” Should this goal be met, then 680 of the estimated 2,720 workers in the Stadium Development Retail/Entertainment Center would already live in the Study Area, and would not require new housing. Should this goal is not be met, then some of the 2,270 workers in the Candlestick Point area would potentially require new housing.

To provide a range estimate of housing demand, this analysis considers two cases:

- Case 1. The Stadium Development Retail/Entertainment Center does not materialize. For this case, new employment in the Project Area would be about 5,654 jobs.
- Case 2. The target of 25 percent local hires for the Stadium Development Retail/Entertainment Center is met. In this case, 6,695 workers would contribute to housing demand. (This figure is not adjusted to account for removal of any jobs that are currently located in the Candlestick Point Activity Node.)

The number of housing units required to accommodate area workers in either case depends on how those workers occupy housing. Estimates of the number of units needed are derived

below, based on a series of assumptions about the number of jobs and the pattern of hiring and other household formation variables:

Local Hires in Candlestick Point

Table III.C-10 calculates the number of workers who would require housing under the alternative assumptions about the Stadium Development Retail/Entertainment Center proceeding and, if it were to proceed, local hiring for jobs at that project. Proposition D would not apply to the remainder of the Study Area. At the same time, there is no limitation on the number of local area residents who may be hired, either at Candlestick Point or elsewhere. Therefore, workers not included in the local hire assumption for the Stadium Development Retail/Entertainment Center in Table III.C-10 may or may not reside in the Study Area. For the purpose of a conservative estimate, all workers not explicitly assumed to be local hires are considered to be “not necessarily resident in Study Area” and, therefore, potential “demanders” of housing.

TABLE III.C-10
NUMBER OF NEW WORKERS POTENTIALLY REQUIRING HOUSING:
TWO CASES

	Case 1: No Stadium Development Retail/Entertainment Center	Case 2: Stadium Development Retail/Entertainment Center; 25% Local Hires
New Study Area employment	5,654	8,375
Total Stadium Development Retail/Entertainment Center employment	0	2,721
Number of local hires	-	680
Number of workers not necessarily living in Study Area	-	2,041
Total new employment outside Candlestick Point Activity Node	5,654	6,334
Total new workers not necessarily resident in Study Area	5,654	7,695

Source: Mundie & Associates. 2004.

In Case 2, in which 25 percent of the Stadium Development Retail/Entertainment Center workers are assumed to be local hires, this number of potential housing demanders totals 6,695. In Case 1, with no Stadium Development Retail/Entertainment Center employment, the number of potential housing demanders would be equal to the total reduced number of new Study Area employees expected with the Project, or 5,654.

Workers per Household

The Planning Department projections of employed residents and households in the Study Area suggest that the average Study Area household had about 1.3 workers in 2000 and that the average will increase to about 1.4 workers per household in 2025. This analysis considers the middle of the range, at 1.35 workers per household.⁹ This analysis considers the possibility that, given high housing prices in San Francisco, new workers may not necessarily form new households. To consider the range of options that might be available to new workers, three “scenarios” within each case are considered:

- **Scenario A:** Every new non-local Study Area worker in the Study Area lives in a different household, and all households in which these workers live are new to the Bay Area. In this scenario, the result is one new household per worker, and the number of new households is the same as the number of new workers: between 5,654 (Case 1) and 7,695 (Case 3).
- **Scenario B:** Each household has an average of 1.35 Study Area workers. While it is unlikely that every worker employed in the Study Area who lives in a multi-worker household will live only with others who work in the area, this scenario is the same as one in which the number of workers commuting into the area is the same as the number commuting out of the area. This scenario yields estimates of new worker-based households ranging from 4,188 in Case 1 to 5,700 households in Case 2.
- **Scenario C:** Every new Study Area worker already lives in the San Francisco Bay Area, within commute distance of the project, or moves into an existing household. In this scenario, there are no new household formations.

To derive a conservatively high estimate of impacts, this analysis carries forward the highest number of new households in each case which is Scenario A: 5,654 in Case 1 and 4,843 in Case 2.¹⁰

Housing Units

Although the transportation model did not assume any housing vacancies in the Study Area, some vacant units must be available at all times to maintain reasonable choice in the housing market. This analysis assumes an average long-term vacancy rate of 3.8 percent. Applying this rate to the estimated number of new San Francisco households yields an estimated need for between about 5,877 and about 7,999 new housing units (Case 1 and Case 2, respectively, with one Study Area worker per household).

This maximum total demand for housing in Case 1 (no Stadium Development Retail/Entertainment Center) would comprise about 96 percent of the 6,146 units expected with the proposed Redevelopment Plan. The maximum total demand in Case 2, which includes the Stadium Development Retail/Entertainment Center, would exceed the number of new units expected in the Study Area by about 30 percent.

If the average number of area workers per new household were 1.35 rather than 1 (Scenario B instead of Scenario A), then the total demand for housing in the Study Area as a result of added employment would be between 4,354 and 5,925 units.

The Setting section notes that San Francisco would need to add about 19,800 housing units between 2000 and 2025 to accommodate projected household growth in the Base Case. In projections consistent with the Project, San Francisco would gain 40,850 housing units. The maximum demand associated with employment growth in the Study Area would comprise between 14 and 19 percent of that citywide housing growth, compared to only about six percent of citywide employment growth, as shown in Table III.C-11.

Commuting

It is unlikely that 100 percent of new worker households would seek to live within the boundaries of the Study Area. A 1997 study of jobs-housing relationships commissioned by the City and County of San Francisco found that 55 percent of San Francisco workers are likely to seek housing in San Francisco, while the other 45 percent are likely to commute from

TABLE III.C-11
STUDY AREA EMPLOYMENT GROWTH AND NEW HOUSING DEMAND
AS A PERCENT OF CITYWIDE GROWTH AND DEMAND, 2000-2025

	Study Area	San Francisco	Study Area as Percent of San Francisco
Employment Growth	8,375	129,794	6%
New Housing Demand			
Case 1 (No Stadium Development Retail/Entertainment Center)	5,654	40,850	14%
Case 2 (25% local hires at Stadium Development Retail/Entertainment Center)	7,695	40,850	19%

Source: Mundie & Associates, 2004.

other places.¹¹ Applying this commute adjustment factor to the estimated total housing demand yields an adjusted maximum estimate of demand (Scenario A) for between 3,232 and 4,399 housing units. Even at the high end of the range, this estimate of demand does not exceed the total of 6,146 new units expected within the Study Area.

Table III.C-12 compares this commute-adjusted estimate of housing demand to the citywide total suggested by the Base Case projections. It shows that the percent of citywide housing units that would be required to accommodate Study Area workers is substantially greater than the percent of citywide employment growth represented by the Study Area. Unless this situation is reversed in other parts of San Francisco, it is likely that the City will not provide sufficient housing to accommodate that 55 percent of its new workers over the next two decades.

The foregoing comparison of housing expected with the Project to the amount of housing needed to accommodate expected employment growth is the most conservative (highest) case. The comparison assumes that each worker in a Project-related job creates a new household, and that each work-related household has only one person employed in the Study Area. If, instead, it is assumed that work-related households have an average of 1.35 workers, then the

TABLE III.C-12
STUDY AREA EMPLOYMENT GROWTH AND COMMUTE—ADJUSTED NEW
HOUSING DEMAND
AS A PERCENT OF CITYWIDE GROWTH AND DEMAND, 2000 – 2025

	Study Area	San Francisco	Study Area as Percent of San Francisco
Employment Growth	8,375	129,794	6%
New Housing Demand—Commute Adjusted			
Case 1 (No Stadium Development Retail/Entertainment Center)	3,232	40,850	8%
Case 2 (25% local hires in Candlestick Point)	4,399	40,850	11%

Source: Mundie & Associates, 2004.
 Note: Assumes 55 percent of households seek to live in San Francisco.

households of new Study Area workers would occupy, between 22 percent and 30 percent of all new housing units in San Francisco, as shown in Table III.C-13. These requirements would still exceed the proportion of expected citywide employment growth accounted for by the Study Area, but by smaller amounts. If only 55 percent of these worker households were to live in San Francisco, then Study Area workers' households would occupy between 12 and 16 percent of all new housing units in San Francisco. In all cases, the number of housing units needed would be less than 6,146 units expected in the Study Area.

Need for Affordable Housing Associated with New Employment in the Study Area

The *Draft Jobs Housing Nexus Analysis*, prepared by KMA in 1997, also provides factors for estimating the number of households associated with new retail employment that would have incomes in the very low-, low-, and moderate-income ranges. These households could require some type of financial assistance to be able to afford housing in San Francisco.

TABLE III.C-13
STUDY AREA EMPLOYMENT GROWTH AND NEW HOUSING DEMAND
(WITH AND WITHOUT COMMUTE ADJUSTMENT)
AS A PERCENT OF CITYWIDE GROWTH AND DEMAND, 2000 – 2025
ASSUMING 1.35 WORKERS PER HOUSEHOLD

	Housing Households	Housing Units	Percent Of Citywide Housing Units
Without Commute Adjustment: All Worker Households Live in SF			
Case 1 (No Stadium Development Retail/Entertainment Center)	4,188	4,354	11%
Case 2 (25% local hires at Stadium Development Retail/Entertainment Center)	5,700	5,925	15%
With Commute Adjustment: 55 Percent of Worker Households Live in SF			
Case 1 (No Stadium Development Retail/Entertainment Center)	2,303	2,395	6%
Case 2 (25% local hires at Stadium Development Retail/Entertainment Center)	3,135	3,259	8%
Employment Growth			6%

Source: Mundie & Associates, 2004.

Table III.C-14 presents the income distribution derived in the 1997 analysis for each economic/industry sector. That study omitted PDR activities; for this report, incomes of PDR workers are assumed to reflect the average distribution of incomes in all other activities.

TABLE III.C-14
INCOME DISTRIBUTIONS OF WORKERS IN VARIOUS INDUSTRY GROUPS

Income Group	Industry					
	MIPS ¹	RET ²	VISIT ³	MED ⁴	PDR ⁵	CIE ⁶
Above-moderate Income (more than 120% of median)	43%	38%	38%	44%	41%	44%
Moderate Income (70%-120% of median)	27%	26%	27%	27%	27%	26%
Low Income (50-70% of median)	18%	22%	21%	18%	19%	18%
Very Low Income (up to 50% of median)	12%	14%	14%	11%	13%	12%
Total Very Low, Low, & Moderate	57%	63%	63%	56%	59%	56%

Source: Keyser Marston Associates, Inc. and Gabriel Roche, Inc., *Draft Jobs Housing Nexus Analysis, City of San Francisco*, July, 1997.

Notes:

- ¹. Management and professional information services.
- ². Retail and entertainment.
- ³. Visitor lodging.
- ⁴. Medical and health services.
- ⁵. Production, distribution, and repair services.
- ⁶. Cultural, institutional, and educational services.

Table III.C-15 applies those income distributions to derive estimates of the projected need for housing affordable to new moderate-income, low-income, and very-low income households associated with new employment anticipated under the Project. Estimates are provided for the sets of assumptions yielding the lowest and highest estimates of housing demand. The lowest estimate is associated with Case 1 (no Stadium Development Retail/Entertainment Center), 1.35 workers per household, and 55 percent of households living in San Francisco; the highest estimate is associated with Case 2 (when the Stadium Development Retail/Entertainment Center is completed) assuming one worker per household and all households living in San Francisco. In all, between about 1,347 (Case 1, more workers per household, with commute adjustment) and 4,414 households (Case 2, fewer workers per household, no commute adjustment) could require some type of financial assistance to be able to afford the housing they seek in San Francisco.

TABLE III.C-15
PROJECTED NEED FOR AFFORDABLE HOUSING BY
HOUSEHOLDS EXPECTED TO SEEK HOUSING IN SAN FRANCISCO

Income Group	Lowest Estimate of Need ¹						Total
	CIE ²	MED ³	MIPS ⁴	PDR ⁵	RET ⁶	VISIT ⁷	
Total Workers	444	128	2,240	1,827	1,004	11	5,654
Total Households	181	52	913	744	409	4	2,303
Above-moderate Income	80	23	393	305	455	2	958
Moderate Income	47	14	247	201	106	1	616
Low Income	33	9	164	141	90	1	438
Very Low Income	22	6	110	97	57	1	293
Total Very Low, Low, & Moderate	102	29	521	439	253	3	1,347
<i>Total Housing Units</i>	<i>188</i>	<i>54</i>	<i>949</i>	<i>773</i>	<i>425</i>	<i>4</i>	<i>2,393</i>
<i>% Needed for Very Low, Low, & Moderate Income Households</i>							56%
Highest Estimate of Need ⁸							
	CIE ²	MED ³	MIPS ⁴	PDR ⁵	RET ⁶	VISIT ⁷	Total
Total Workers	444	128	2,240	1,827	3,725	11	8,375
Total Households	444	128	2,240	1,827	2,794	11	7,444
Above-moderate Income	195	56	963	749	1,062	4	3,029
Moderate Income	115	35	605	493	729	3	1,977
Low Income	80	23	403	347	615	2	1,470
Very Low Income	53	14	269	238	391	2	967
Total Very Low, Low, & Moderate	248	72	1,277	1,078	1,732	7	4,414
<i>Total Housing Units</i>	<i>462</i>	<i>133</i>	<i>2,328</i>	<i>1,899</i>	<i>2,904</i>	<i>11</i>	<i>7,737</i>
<i>% Needed for Very Low, Low, & Moderate Income Households</i>							56%

Source: Mundie & Associates, 2004. Based on household income distribution in Keyser Marston Associates, Inc. and Gabriel Roche, Inc., *Draft Jobs Housing Nexus Analysis, City of San Francisco*, July, 1997.

Notes:

1. Case 1 – No Stadium Development Retail/Entertainment Center, 1.35 workers per household, 55 percent of workers live in San Francisco.
2. Cultural, institutional, and educational services.
3. Medical and health services.
4. Management and professional information services.
5. Production, distribution, and repair services.
6. Retail and entertainment.
7. Visitor lodging.
8. Case 2 – With Stadium Development Retail/Entertainment Center, 25%, local hires, 1 worker per household, 100 percent of workers live in San Francisco.

Because there are no standards of significance for housing, this shortfall of affordable housing units is not considered to be a less-than-significant impact. Nevertheless, the Project includes an Affordable Housing Program to address the need for affordable housing in the Project Area and to assist current homeowners in maintaining and retaining their homes.

Population

The transportation model for the Project anticipates population growth of 20,896 residents in the Study Area. This increase would be substantially larger than the increase of 2,815 residents anticipated in the Base Case and would account for nearly one-quarter (24 percent) of the citywide population growth (80,100 residents) anticipated in San Francisco during the 25-year period in “Scenario C+,” which is the projection set consistent with the Project.

The population growth projected by the transportation model is consistent with the 6,146 new housing units projected by the model. As noted elsewhere, the model does not allow for housing vacancies, so the actual number of residents could be smaller, or the number of housing units could be larger.

Population Growth Associated with New Employment in the Study Area

If housing units are built in San Francisco to accommodate the maximum of up to 7,695 new households that are related to new employment in the Study Area, then the City’s population will grow commensurately. The Planning Department projection estimates that the average household size in the Study Area will grow from approximately 3.25 residents per household in 2000 to 3.31 in 2025.¹² If the 2025 average of 3.31 persons per household is characteristic of the new households associated with all new employment, then these 7,695 new households would have a total population of 25,470 new residents (that is, new workers in the Study Area who do not already live in the Study Area and others who share those workers’ households). This additional population would:

- Exceed the gain of 2,815 expected in the Base Case and the gain of 20,896, projected by the transportation model to occupy the 6,146 new housing units expected in the Study Area.

- Comprise about 34 percent of the citywide population increase of 73,833 between 2000 and 2025 projected in the Base Case and about 29 percent of the citywide increase of 88,100 residents projected for Scenario C+ (the Project).

If the commute adjustment is incorporated into the estimate of future population growth, then a maximum of 4,399 new households (7,999 new households, less 45 percent living outside the City) would locate in San Francisco. With an average of 3.31 residents, these households would add 14,561 residents. This figure is equal to approximately 70 percent of the 20,896 new Study Area residents projected by the transportation model. It would comprise about 20 percent of the citywide gain forecast for the Base Case and about 17 percent of the citywide population increase forecast for Scenario C+.

NOTES – Employment, Housing, and Population

¹ The Study Area TAZs are 653, 656, 657, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 705, 706, 707, 711, 712, 713, 714, 724, 725, 727, 744, 746, and 766, which includes a TAZ that primarily covers the Central Waterfront and one that covers Port property. The excluded TAZ for Hunters Point Shipyard is 726.

² As stated previously, the Study Area does not include Hunters Point Shipyard.

³ Current population figures in this report focus on the household population because population projections for the Study Area address the household population. Total population, which includes people living in group quarters and other arrangements, is higher by a small amount (about 2.5 percent for the metropolitan area). Comparisons of year 2000 and projected (2020 or 2025) population levels would not be affected by this minor difference.

⁴ The difference between households and housing units is the housing vacancy rate.

⁵ The City would also have some number of non-household residents; see previous footnote.

⁶ Table III.C-5 uses the City's ABAG-based projection of households and household population for both the City and the Study Area, rather than ABAG's own published projection. The citywide figure in the table is slightly higher for 2025.

⁷ City and County of San Francisco, *Final Mission Bay Subsequent Environmental Impact Report*, 1998, p.V.C.23.

⁸ *Community Planning in the Eastern Neighborhoods: Rezoning Options Workbook* – First Draft, p. 38. San Francisco Planning Department, February 2003.

⁹ To achieve the transition from about 1.3 workers per household in 2000 to about 1.4 in 2025 would require that all new households have an average of about 2.3 workers, or else that one in 10 existing households gain a worker.

¹⁰ Scenario A is conservative because it assumes that all workers are not local even though it is likely that some (25% are required) would already live in Bayview Hunters Point. This results in the highest number of new household formations.

¹¹ Keyser Marston Associates, Inc. and Gabriel Roche, Inc., *Draft Jobs Housing Nexus Analysis, City of San Francisco*, July, 1997.

¹² This estimate is higher than the ABAG *Projections 2003* estimates forecast for 2025 (2.27) and the citywide average household size found by the 2000 U.S. Census (2.30).

D. TRANSPORTATION¹

The San Francisco Planning Department's citywide population, housing, and employment estimates are based on ABAG estimates. The citywide total is disaggregated to traffic analysis zones (TAZs). For this discussion of transportation, the Study Area comprises 20 TAZs that are located wholly or partly south of Cesar Chavez Street, east of Bayshore Boulevard, and north of the San Mateo County line, with the exception of the TAZs that contain the Hunters Point Shipyard, Silver Terrace (residential), Central Bayview (residential), and Executive Park.² The Project Area and the Transportation Study Area (Study Area) defined for this EIR are compared in Figure III.D-1. The Study Area is larger than the Project Area.

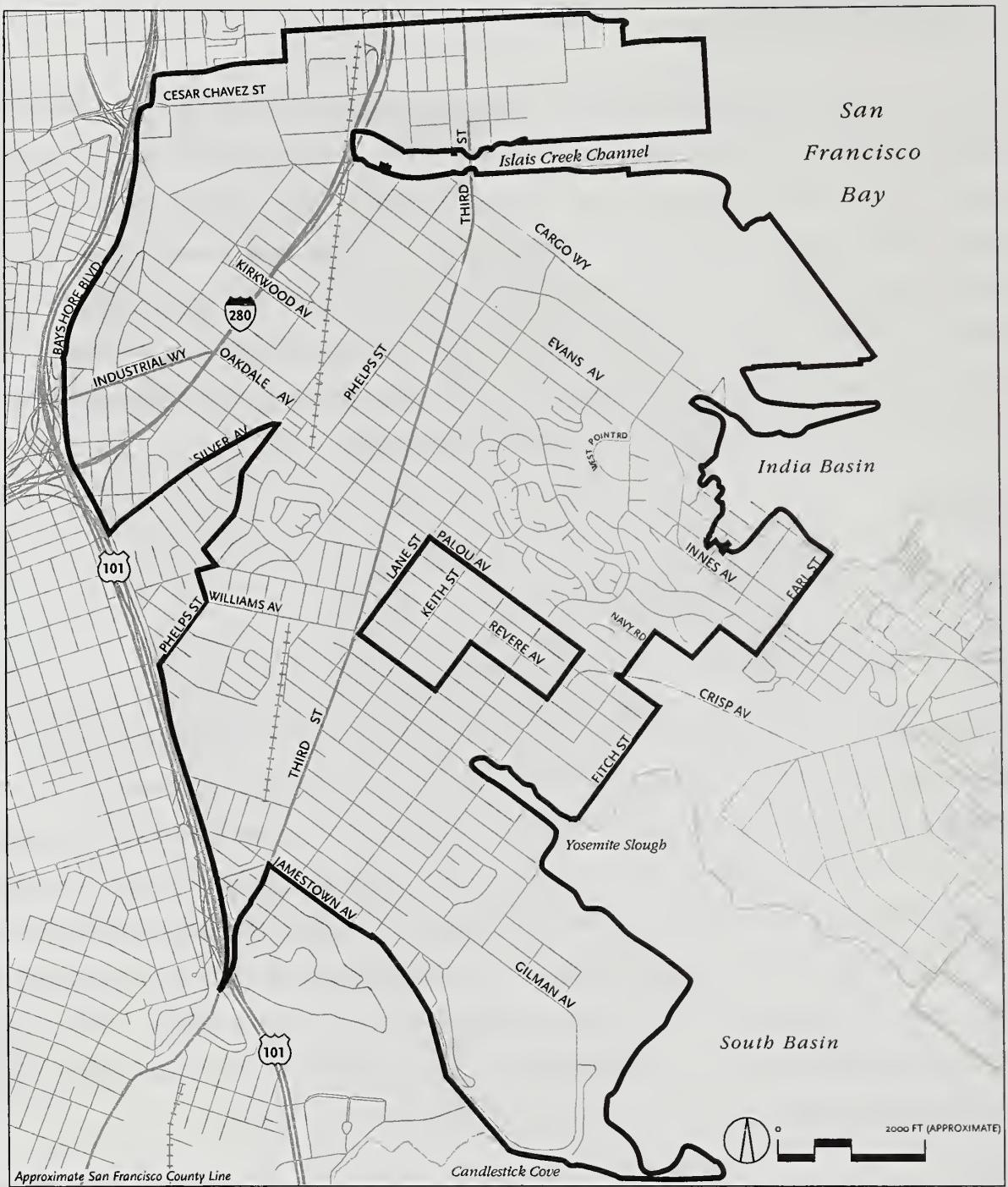
SETTING

EXISTING ROADWAY FACILITIES

Regional Roadway Network

Interstate 280 (I-280) is a ten-lane freeway that connects the Peninsula with the South Bay. It also provides direct access to US 101 and State Route 1 (SR-1). The freeway terminates in the South of Market Area at King Street and Sixth Street. I-280 carries approximately 185,000 vehicles per day east of US 101. The closest northbound on-ramp is located at Indiana Street/25th Street and Alemany Boulevard. The closest northbound off-ramps are located at Alemany Boulevard and Cesar Chavez Street. The closest southbound on- and off-ramps are located at Pennsylvania Avenue and Alemany Boulevard (Alemany Boulevard/Mission Street Exit). The closest southbound off-ramps are located at Pennsylvania Avenue and Alemany Boulevard. These ramps are located approximately 0.75 mile to two miles from the activity nodes.

US 101 is a north and south freeway connecting the Peninsula with Marin County to the North and San Jose to the South. US 101 is a ten-lane freeway between I-80 and I-280; between I-80 and the Golden Gate Bridge, US 101 uses surface streets, including Van Ness Avenue, Lombard Street, and Doyle Drive. US 101 carries approximately 199,000 vehicles per day north of Third



SOURCE: Clement Designs after San Francisco Redevelopment Agency

10-12-04

— Study Area boundary □ Rezoning and Redevelopment Project Areas

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FIGURE III.D-1 TRANSPORTATION STUDY AREA

Street. The closest northbound on-ramps are located at Harney Way, Third Street and Cesar Chavez Street. The closest northbound off-ramps are located at Third Street, Silver Avenue, San Bruno Avenue and Third Street. The closest southbound on-ramps are located at Third Street, Beatty Avenue, Silver Avenue and Cesar Chavez Street. The closest southbound off-ramps are located at Cesar Chavez Street, Silver Avenue, Third Street and Alanna Way. These ramps are located 0.5 mile to two miles from the activity nodes.

Local Roadway Network

Third Street serves as the principal north-south arterial in Bayview Hunters Point, carrying approximately 13,000-22,000 vehicles per day. It extends south from Le Conte Avenue to Market Street. Third Street becomes Kearny Street north of Market Street. It is designated as a Major Arterial, Citywide Bicycle Route, and a Primary Transit Street in the Transportation Element of the San Francisco *General Plan*.

The Third Street Light Rail Transit (LRT) is currently under construction. The Third Street LRT is scheduled to open in 2005, and would provide service between the existing Fourth Street/King Street Station and the Bayshore Caltrain Station. With the construction of the Third Street LRT, Third Street would be narrowed from three through lanes in each direction to two through lanes in each direction, with the Third Street LRT running in a median; left turns from Third Street at a number of intersections would be prohibited.

Bayshore Boulevard is a north-south arterial that runs parallel to US 101 carrying approximately 17,000-22,000 vehicles per day. It extends south from the US 101 interchange at Potrero Avenue, crosses Third Street at the US 101 interchange, and continues south into San Mateo County. Bayshore Boulevard provides three lanes in each direction. The San Francisco *General Plan* designates Bayshore Boulevard as a Major Arterial and a Bicycle Route.

Cesar Chavez Street is an east-west arterial carrying approximately 12,000 vehicles per day. It serves as a connector to Pier 80, I-280, US 101, the Mission District, and the Noe Valley neighborhood. Cesar Chavez Street provides two lanes in each direction. It is designated as a Major Arterial and a Bicycle Route in the San Francisco *General Plan*.

Other major streets serving the Bayview Hunters Point neighborhood include Evans Avenue, Industrial Way, Alemany Boulevard, Silver Avenue, and Carroll Avenue.

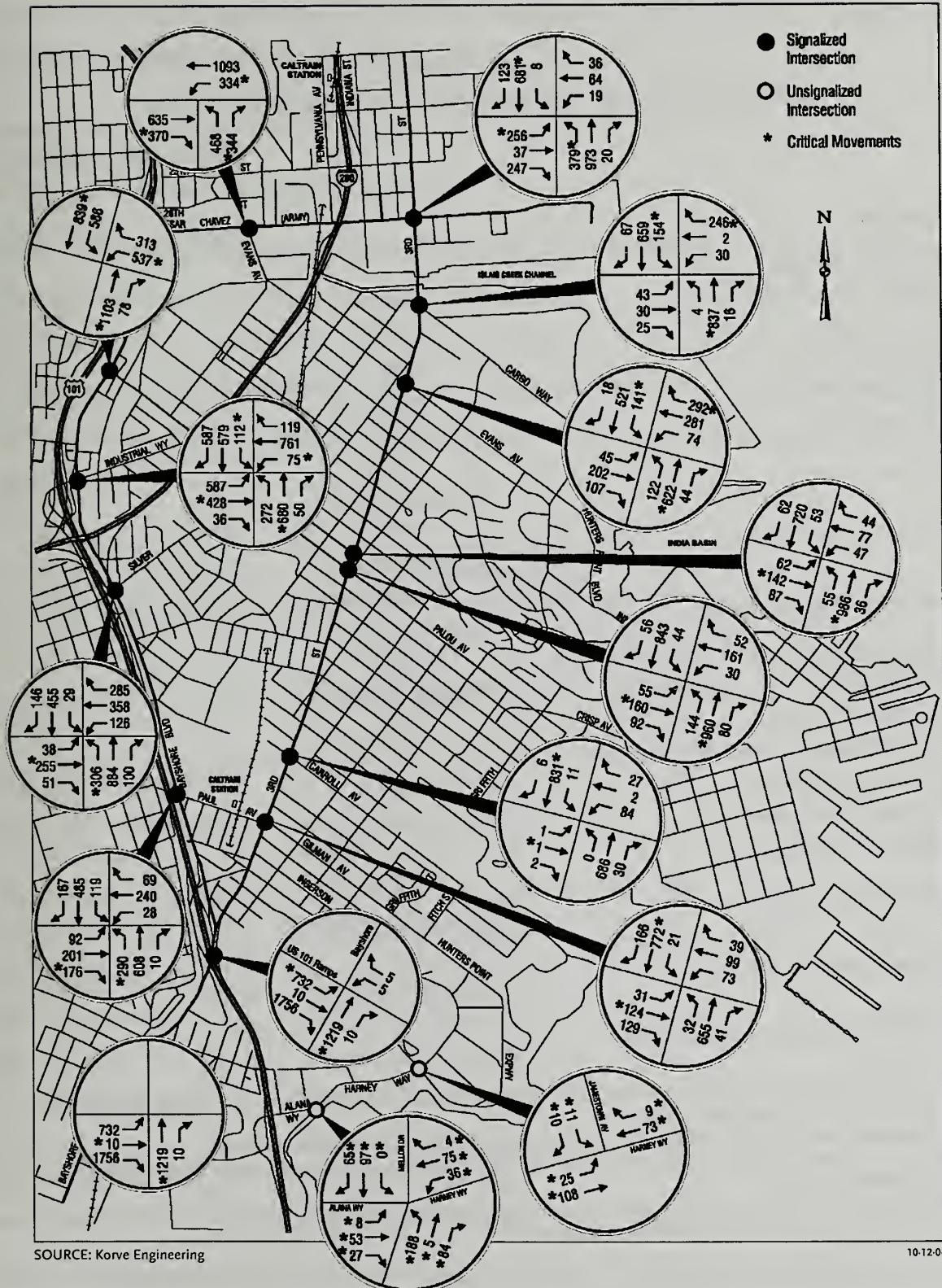
Intersection Level of Service Conditions

Existing traffic conditions were evaluated for the weekday PM peak hour (generally between 4:30 and 5:30 p.m.) conditions at the 15 study intersections and weekend midday peak hour conditions at six of the study intersections. Weekend midday peak hour conditions were assessed to address shopping and football game attendance at the Stadium Development Retail/Entertainment Center. Intersection turning movement counts were collected at the 15 study intersections in June, 2001 (see Figure III.D-2). The existing counts were performed prior to the start of the Third Street LRT construction (the 2001 traffic counts, while over two years old, are considered representative of conditions on Third Street before disruption of circulation by Third Street LRT construction). I-280 ramp counts were collected in September, 2001; US 101 ramp counts were obtained from Caltrans.

Traffic counts for the intersections of Bayshore Boulevard and Silver Avenue, Industrial Way, and Oakdale Avenue and for the intersections of Harney Way/Alanna Way and Harney Way/Jamestown Avenue were based on recent data available for transportation studies in the vicinity.

The Level of Service (LOS) concept qualitatively characterizes traffic conditions associated with varying levels of traffic. An LOS determination is a measure of congestion, which is the principal measure of roadway service. These range from LOS A that indicates a free-flow condition to LOS F that indicates a jammed condition. LOS A, B, and C are generally considered to be satisfactory service levels while LOS D is marginally acceptable, and LOS E and LOS F conditions are unacceptable.

All intersections are signalized; except Alana Way/Harney Way and Harney Way/Jamestown Avenue, which are two-way stop controlled intersections. All of the study intersections operate at LOS D or better, acceptable operating conditions in both the weekday PM and weekend midday peak hours (see Table III.D-1) For unsignalized intersections, the delay reported represents the total delay experienced by all vehicles at the intersection. The delay reported in parentheses



SOURCE: Korve Engineering

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FIGURE III.D-2 EXISTING CONDITIONS AT STUDY INTERSECTIONS

TABLE III.D-1
EXISTING LEVEL OF SERVICE AT INTERSECTIONS

Intersection	Existing Conditions		
	LOS	Delay (sec/veh) ¹	
Signalized Intersections			
Third St/Cesar Chavez St	PM	C	30.5
Third St/Cargo Way	PM	C	21.7
Third St/Evans Ave	PM	C	23.6
Third St/Oakdale Ave	PM	B	15.8
Third St/Palou Ave	PM	B	15.9
Third St/Carroll Ave	PM	A	8.8
	Weekend MIDDAY	A	3.1
Third St/Paul Ave/Gilman Ave	PM	B	16.9
	Weekend MIDDAY	B	12.1
Bayshore Blvd/US 101 SB Ramps	PM	C	20.4
	Weekend MIDDAY	B	12.1
Bayshore Blvd/Paul Ave	PM	B	19.6
	Weekend MIDDAY	B	12.9
Bayshore Blvd/Silver Ave ²	PM	D	47.1
Bayshore Blvd/Industrial Way/ Alemany Blvd ²	PM	D	38.3
Bayshore Blvd/Oakdale Ave ²	PM	C	23.0
Cesar Chavez St/Evans Ave	PM	D	43.2
Unsignalized Intersections			
Alanna Way/Harney Way ^{3,4}	PM	A (B)	5.9 (13.3)
	Weekend MIDDAY	A (A)	5.8 (11.2)
Harney Way/Jamestown Ave ^{3,4}	PM	A (A)	1.7 (9.3)
	Weekend MIDDAY	A (A)	5.7 (9.3)

Source: Korve Engineering, Inc. – May 2004.

Notes:

At two-way stop controlled intersections, the worst minor street approach LOS and delay are presented in parentheses.

1. Delay is measured in seconds per vehicle.
2. Existing counts taken from the *491 Bayshore Boulevard Home Depot DEIR* (March 29, 2003).
3. Existing counts taken from the *Executive Park 2003 Revised Development Plan Transportation Study – Preliminary Draft 2 Report* (April 6, 2004).
4. Delay reported for unsignalized intersections represents delay experienced by all vehicles at intersections. Delay for worst approach to intersection is also reported in parentheses.

represents the delay experienced at the worst approach to the intersection. Figure III.D-3 illustrates LOS conditions at study intersections.

TRANSIT

San Francisco Municipal Railway (MUNI)

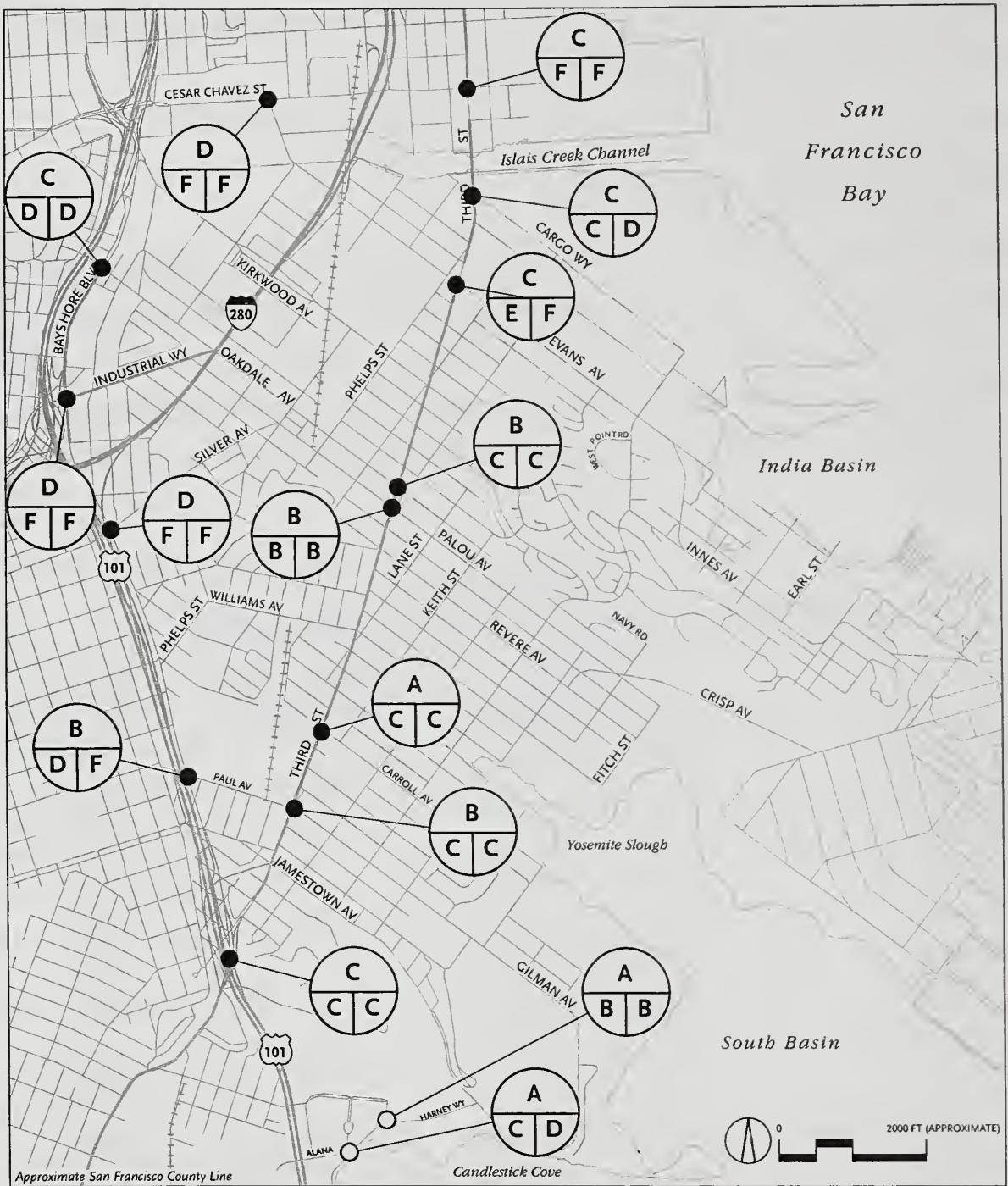
The San Francisco Municipal Railway (MUNI) provides bus; trolley bus; surface and subway rail transit; and cable car throughout San Francisco and over water. In addition to bus routes, the Third Street LRT, as noted above, is under construction. Table III.D-2 summarizes existing MUNI service in Bayview Hunters Point, including hours of operation and headways. Figure III.D-3 illustrates the existing MUNI bus routes in Bayview Hunters Point, as well as the MUNI screenlines.

TABLE III.D-2
BAYVIEW HUNTERS POINT TRANSIT SERVICE SUMMARY

Line	Weekday Hours of Operation	Vehicles per Hour (PM Peak)	PM Peak Headway
9 - San Bruno	5:00 a.m.-12:20 a.m.	11	5 min.
9X - San Bruno Express	9:15 a.m.-6:10 p.m.	12	5 min.
9AX / BX - San Bruno A, B Express	6:50 a.m.-9:05 a.m. 4:00 a.m.-10:15 p.m.	14	5 min.
15 - Third St.	5:00 a.m. – 12:15 a.m.	9	7 min.
19 - Polk	5:20 a.m. – 7:30 p.m.	7	9min.
23 - Monterey	5:00 a.m. – 12:50 a.m.	4	15 min.
24 - Divisadero	5:15 a.m. – 1:15 a.m.	8	8 min.
29 - Sunset	5:55 a.m.-12:45 a.m.	4	15 min.
44 – O'Shaughnessy	5:00 a.m.-12:30 a.m.	7	9 min.
54 – Felton	5:30 a.m. – 2:00 a.m.	3	20 min.
56 – Visitacion Valley	6:20 a.m. – 9:00 p.m.	2	40 min.
91 - Owl	12:15 a.m.- 4:40 a.m.	N/A *	N/A *

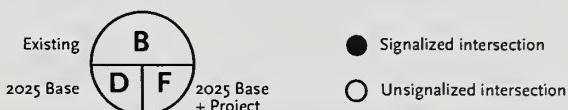
Source: Third Quarter Service Standards FY 2003. Online Time Schedule as of July 2004, San Francisco Municipal Railway
Notes:

* Route 91 does not provide service during the weekday PM peak hour.



SOURCE: Korve Engineering

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FIGURE III.D-3 WEEKDAY PM PEAK HOUR INTERSECTION LEVELS OF SERVICE

Existing MUNI Screenline Analysis

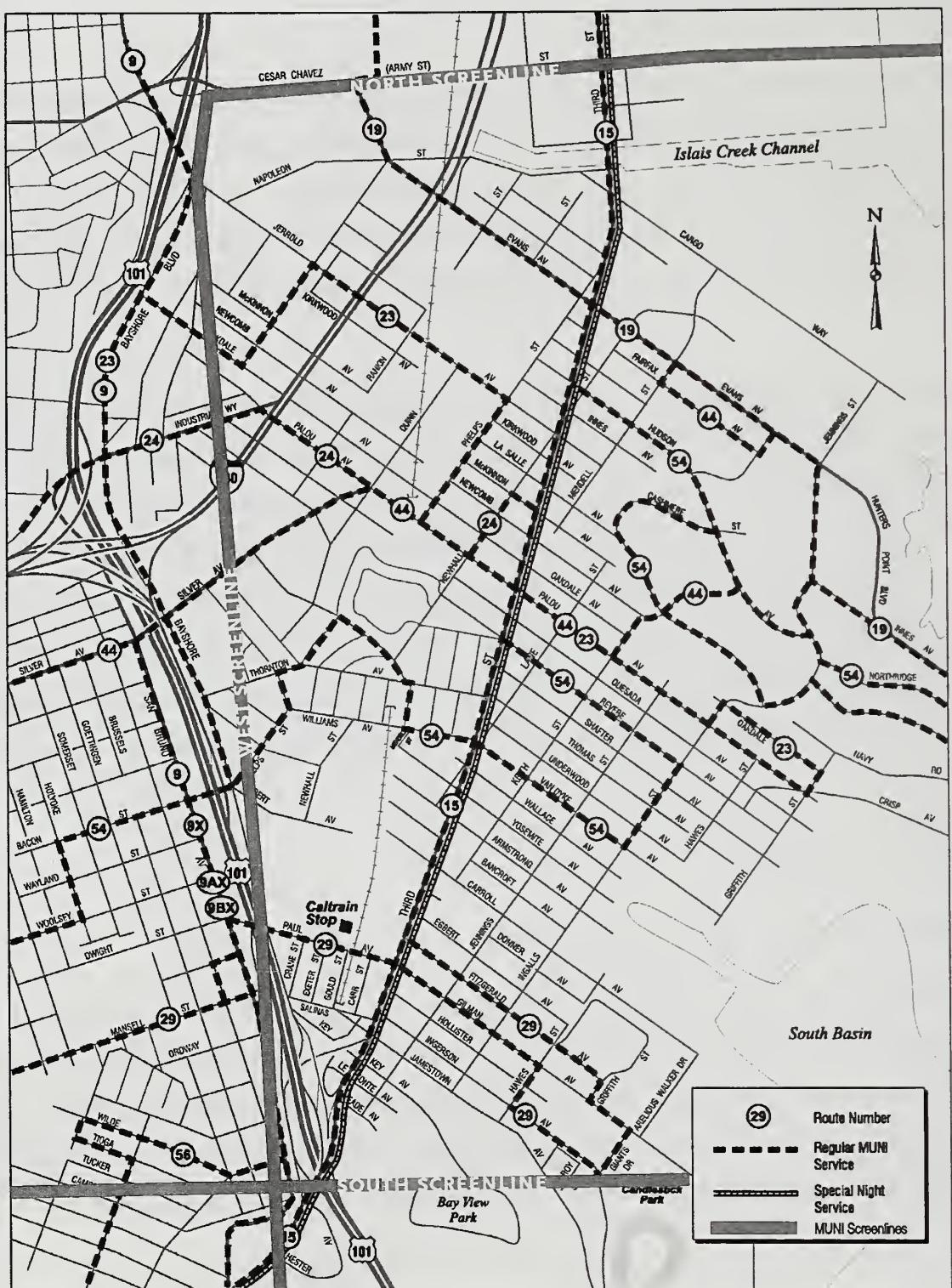
MUNI impact analysis was performed at three hypothetical screenlines. The screenlines were drawn at the north, west and south perimeters of the Project site. Figure III.D-4 illustrates these screenlines and the MUNI bus lines included in each screenline. The north screenline includes MUNI Third Street LRT to Chinatown and MUNI lines 15 and 19. The south screenline includes MUNI Third Street LRT. The west screenline includes MUNI bus lines 23, 24, 29, 44, 54, and 56.

The current ridership data for the MUNI buses were obtained from the MUNI Monitoring Report, dated November 18, 2003 at the stops closest to the screenlines. MUNI transit ridership at the screenlines was estimated by taking the difference in estimated total transit ridership from the SFCTA model between the year 2025 Baseline Scenario and the 2025 Project Scenario in the Study Area and then adding this additional ridership to the 2025 Baseline at the screenlines. These MUNI transit trips were distributed to the screenlines. The estimated MUNI ridership also includes transfers to regional transit carriers, such as AC Transit, Golden Gate, SamTrans and BART. Transfers to Caltrain are considered to be local MUNI trips, therefore, not assigned to the screenlines.

Regional Transit System

SamTrans, AC Transit, and Golden Gate Transit

Three regional bus transit providers serve San Francisco: SamTrans from the Peninsula, AC Transit from the East Bay, and Golden Gate Transit from the North Bay. In general, regional transit riders must transfer to or from MUNI Route 15 at the Transbay Terminal in downtown San Francisco to travel to the Bayview Hunters Point area. Travelers from the Peninsula, although SamTrans routes use US 101 near Bayview Hunters Point, do not stop in the area.



SOURCE: Korye Engineering

10-12-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.D-4 MUNI BUS ROUTES AND MUNI SCREENLINES

BART

The Bay Area Rapid Transit District (BART) operates regional rail transit service between the East Bay (from Pittsburg/Bay Point, Richmond, Dublin/Pleasanton, and Fremont) and San Francisco, and between San Mateo County (Millbrae and San Francisco International Airport) and San Francisco. During the PM peak period, headways are generally 5 to 15 minutes for each line. The closest BART stations to Bayview Hunters Point are the 24th/Mission, Glen Park, and Balboa Park Stations. MUNI Routes 15, 23, 29, 44 and 54 serve Bayview Hunters Point from the Glen Park and Balboa Park BART Stations. Parking is not available at the 24th/Mission and Balboa Park Stations. Recent BART ridership counts, conducted in April 2003, estimate approximately 292,950 weekday daily boardings system-wide.

Caltrain

Caltrain provides rail passenger service on the Peninsula between Gilroy and San Francisco. The Peninsula Corridor Joint Powers Board (JPB), a joint powers agency consisting of San Francisco, San Mateo, and Santa Clara Counties, operates the service. Caltrain currently operates 76 trains each weekday, with a combination of express and local service, travel from the San Francisco terminal at Fourth and Townsend Streets. Headways during the PM peak period are approximately 5 to 30 minutes.

Caltrain ridership has been recently estimated to be about 28,900 riders per day. The only station in Bayview Hunters Point is Paul Avenue station, west of Third Street. However, only two northbound and two southbound weekday trains stop at the Paul Avenue station. Studies are underway, evaluating the potential to move the Paul Avenue Caltrain Station northward to Oakdale Avenue. The Bayshore Caltrain Station also serves the southerly portion of the project vicinity.

In addition, the San Francisco County Transportation Authority and Caltrain are currently studying the feasibility of constructing a new Caltrain Station on Oakdale Avenue (to replace the Paul Avenue station) in the vicinity of the Southeast Community Facility.

Ferry Services

Ferries provide service between San Francisco and various East Bay and North Bay cities. Ferries travel to and from Larkspur, Sausalito, Tiburon, Oakland, Alameda, Wharf, and Harbor Bay Isle. Ferry terminals in San Francisco are located at the Ferry Building, near Market Street/The Embarcadero, and at Pier 41 at Fisherman's Wharf.

Passengers may access the Ferry Building, by taking MUNI Route 15 to the Caltrain station (at 4th/King Street) where they can transfer to the MUNI N, 80X, 81X, 82X Lines or transfer to MUNI F-line on Market Street and use the F-line to the Ferry Building. Passengers may access Pier 41 by MUNI Route 15.

Existing Regional Transit Screenline Analysis

A Screenline analysis for regional transit carriers (BART, AC Transit, SamTrans, Caltrain, Golden Gate Transit) and three ferry systems (Alameda/Oakland Ferry, Blue and Gold Fleet, and Golden Gate Ferry), determined the current service volumes and capacity. Three screenlines have been established around San Francisco to analyze potential impacts of the Project on the regional transit carriers: (1) East Bay; (2) North Bay; and (3) South Bay. All regional carriers operate with available capacity, except BART East Bay lines.

PEDESTRIAN CONDITIONS

Overall, pedestrian volumes in the Bayview Hunters Point area are low, and pedestrian circulation is not a major issue. However, some locations have impediments to pedestrian circulation due to the congregation of pedestrians, sidewalk furniture and fixtures, and mature trees with large planting areas, which serve to reduce the effective sidewalk width. In the Bayview Hunters Point area, pedestrian facilities vary but tend to be less than optimal. Sidewalks are not always present or are discontinuous, and many sidewalks are impassible due to cars parking on the sidewalks. Few intersections other than those on Third Street have crosswalks; many crosswalks are difficult to see as the street striping has eroded, and signalized intersections do not have pedestrian signal heads.

BICYCLE CONDITIONS

In the vicinity of Bayview Hunters Point, 17 roadways are designated as Citywide Bicycle Routes in the San Francisco *General Plan*. The *Official San Francisco Bike Route System* lists eight bicycle routes in the vicinity of Bayview Hunters Point. Bicycle volumes on streets in the Bayview Hunters Point area were observed to be relatively low.

PARKING CONDITIONS

Parking conditions throughout the Bayview Hunters Point area vary substantially. In the industrial areas, wide streets, limited posted parking controls, apparent limited enforcement, discontinuous sidewalks, and large and extensive curb cuts for truck loading promote ninety-degree parking and parking on the sidewalk by other vehicles. In these areas, parking appears to be near capacity, with relatively few available parking spaces. However, field observations showed that while some blocks have cars parked on the sidewalks as well as at the curb, an adjacent block would have curb spaces available. Parking in the residential and commercial areas is more typical. In most areas, parking is available on the street. In many neighborhood blocks, homes have off-street parking, and many cars park in the driveways, thereby partially blocking the sidewalk but not impeding pedestrian movement. There are pockets of residential areas near to industrial uses where parallel parking on the sidewalk occurs.

LOADING

In portions of the industrial sections of the Project Area, trucks park at 90-degree angles and available parking spaces are generally full. An increase in loading demand without sufficient number of loading facilities could cause double parking problems in the area.

GOODS MOVEMENT

The Department of Parking and Traffic restricted traffic street map lists the following truck restrictions in the Bayview Hunters Point area:

Restricted Streets: No Through Commercial Vehicles Permitted

- Jamestown Avenue between Third Street and Harney Way, and
- Gilman Avenue between Third Street and Fitch Street.

Weight Restriction: No Vehicles in Excess of 6,000 Pounds Gross

- Palou Avenue between Selby Street and Griffith Street,
- Newhall Street between Quesada Avenue and Palou Avenue,
- Newhall Street between Innes Avenue and Hudson Avenue,
- Quesada Avenue between Third Street and Hawes Street,
- Revere Avenue between Third Street and Hawes Street,
- Shafter Avenue between Third Street and Hawes Street,
- Thomas Avenue between Third Street and Jennings Street,
- Underwood Avenue between Third Street and Jennings Street,
- Lane Street between Palou Avenue and Van Dyke Avenue,
- Keith Street between Palou Avenue and Van Dyke Avenue,
- Jennings Street between Palou Avenue and Thomas Avenue,
- Hollister Avenue between Third Street and Hawes Street,
- Ingerson Avenue between Third Street and Giants Drive,
- Jennings Street between Fitzgerald Avenue and Jamestown Avenue,
- Ingalls Street between Fitzgerald Avenue and Jamestown Avenue,
- Wheat Street between Paul Avenue and Bayshore Boulevard, and
- Crane Street between Paul Avenue and Bayshore Boulevard.

Weight Restriction: Weight Prohibited Over 5 Tons

- Third Street between Jerrold Avenue and James Lick Freeway.

A substantial level of trucking activity occurs in Bayview Hunters Point. Field observations discussed the following conditions:

- Truck traffic throughout the industrial areas is generally high, with heavier concentrations in Northern Gateway Activity Node and the Oakinba Activity Node.
- Early in the day, high volumes of trucks parked at ninety degrees to building loading docks can block vehicle traffic on streets in the industrial areas.
- In some areas, trucks and trailers that were not actively engaged in loading activities appear to be parked and staged for extended periods of time, thereby limiting parking supply. This was observed in the industrial area to the west of Third Street between Evans Avenue and Hudson Avenue and between Cargo Way and Evans Avenue, Tennessee Street and Marin Street south of Cesar Chavez Street, and the area around Ingalls Street between Carroll Avenue and Underwood Avenue.

IMPACTS

SIGNIFICANCE CRITERIA

The following are the significance criteria used by the Planning Department for the determination of impacts associated with a proposed project:

- The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are considered potentially significant if project-related traffic causes the level of service at the worst approach to deteriorate from LOS D or better to LOS E or F and Caltrans signal warrants would be met, or would cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or F. The project may result in significant adverse impacts at intersections that operate at LOS E or F under existing conditions depending upon the magnitude of the project's contribution to the worsening of the average delay per vehicle. In addition, the project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels.
- The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is not available. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the Project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potentially secondary effects.

- The project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the MUNI and regional transit screenlines analyses, the project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the PM peak hour.
- The project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.
- The project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.
- Loading impacts were assessed by comparing the proposed loading space supply to the Planning Code requirements and the estimated loading demand during the peak hour of loading activities.
- Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

TRIP GENERATION

As shown in Table III.D-3, the Project would generate approximately 59,069 new inbound and 59,330 new outbound person-trips during a typical weekday. As shown in Table III.D-4, the Project would generate approximately 4,369 new inbound person-trips and 4,565 new outbound person-trips during the PM peak hour.

TABLE III.D-3
WEEKDAY DAILY TRIP GENERATION BY MODE AND ACTIVITY NODE

Activity Node	Person Trips												Vehicle Trips	
	Auto		Transit		Walk		Bike		Total					
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Northern Gateway	5,205	4,960	848	816	1,257	1,373	77	74	7,387	7,224	3,990	3,859		
Town Center	2,551	2,432	339	358	779	871	62	61	3,730	3,721	1,924	1,805		
Health Center	8,520	8,653	1,690	1,666	2,763	2,608	105	105	13,078	13,033	6,320	6,332		
South Basin	889	814	71	75	633	670	25	26	1,617	1,584	504	424		
Hunters Point Shoreline	9,294	9,252	1,035	1,088	1,977	1,933	81	80	12,388	12,353	6,522	6,603		
Oakinba	1,443	1,379	280	239	391	455	22	22	2,136	2,094	1,113	1,033		
Candlestick	15,779	16,043	1,060	1,202	1,775	1,979	119	98	18,732	19,321	12,553	12,871		
TOTAL	43,681	43,533	5,323	5,443	9,574	9,889	491	465	59,069	59,330	32,926	32,927		
% of Total Person Trips	74.0%	73.4%	9.0%	9.2%	16.2%	16.6%	0.8%	0.8%	100%	100%				

Source: SFCTA travel forecasting model.

TABLE III.D-4
WEEKDAY PM PEAK HOUR TRIP GENERATION
BY MODE AND ACTIVITY NODE

Activity Node	Person Trips												Vehicle Trips	
	Auto		Transit		Walk		Bike		Total					
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Northern Gateway	338	425	71	71	73	95	7	8	489	599	264	331		
Town Center	197	214	42	38	66	65	7	8	312	323	150	157		
Health Center	744	687	162	108	215	194	14	10	1,135	999	545	508		
South Basin	85	17	17	5	42	33	0	0	144	55	46	1		
Hunters Point Shoreline	793	658	116	59	169	140	5	5	1,082	862	544	453		
Oakinba	99	143	7	36	15	41	0	0	121	222	72	108		
Candlestick	966	1,279	42	114	68	104	9	8	1,085	1,505	748	997		
TOTAL	3,221	3,424	458	431	648	673	42	37	4,369	4,565	2,370	2,555		
% of Total Person Trips	73.7	75	10.5	9.5	14.8	14.7	1	0.8	100	100				

Source: SFCTA travel forecasting model.

TRAFFIC IMPACTS

Traffic volumes at each of the study intersections were identified from the SFCTA model results, and evaluated using the 2000 Highway Capacity Manual methodology. LOS and Volume-to-Capacity (V/C) ratios for each intersection are presented in Table III.D-5, for the future year 2025 Base Case, and the Project scenario.

All 2025 conditions at the Alana Way/Harney Way and Jamestown Avenue/Harney Way intersections assume the planned signalization of the two intersections.

Traffic impacts are determined by comparing the Project to the Year 2025 Base Scenario. During the midday peak hour on weekends, the six study intersections would operate at satisfactory conditions. During the weekday evening peak hour the Third Street/Cesar Chavez Street, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Street and Cesar Chavez Street/Evans Avenue intersections would operate at LOS F in all future scenarios.

With Project conditions, six intersections would be significantly impacted by Project traffic. In the weekday PM peak hour the additional trips generated by the Project would deteriorate levels of service to unacceptable levels at two study intersections, and would contribute to substantial delay at four intersections:

- Third Street/Cesar Chavez Street (increase in delay);
- Third Street/Evans Avenue (from LOS E to LOS F);
- Bayshore Boulevard/Paul Avenue (from LOS D to LOS F);
- Bayshore Boulevard/Silver Avenue (increase in delay);
- Bayshore Boulevard/Industrial Way/Alemany Boulevard (increase in delay); and
- Cesar Chavez Street/Evans Avenue (increase in delay).

Chapter IV identifies mitigation measures to reduce these impacts. The intersections of Third Street/Cesar Chavez Street, Third Street/Evans Avenue, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Street/Alemany Boulevard, Evans Avenue/Cesar Chavez Street

TABLE III.D-5
INTERSECTION LOS: YEAR 2025

Intersection	2025 Base		2025 + Project	
	LOS	Delay (sec)	LOS	Delay (sec)
Third Street/ Cesar Chavez St	PM	F (1.19*)	F	80 (1.32*)
Third Street/ Cargo Way	PM	C	D	33.7 38.6
Third Street/ Evans Ave	PM	E (1.02*)	F	62.3 (1.19*)
Third Street/ Oakdale Ave	PM	C	C	29.8 29.5
Third Street/ Palou Ave	PM	B	B	13.5 16.0
Third Street/ Carroll Ave	PM	C MID	C B	20.4 17.5 20.7 17.8
Third Street/ Paul Ave/ Gilman Ave	PM	C MID	C C	25.0 23.2 25.1 23.6
Bayshore Blvd/US-101 SB Ramps	PM	C MID	C B	23.7 17.2 22.9 18.7
Bayshore Blvd/ Paul Ave	PM	D MID	F B	43.7 14.2 80 15.9
Bayshore Blvd/ Silver Ave	PM	F (1.74*)	F (1.96*)	80 80
Bayshore Blvd/Industrial Way/Alemany Blvd	PM	F (1.13*)	F (1.13*)	80 80
Bayshore Blvd/ Oakdale Ave	PM	D	D	47.5 48.1
Cesar Chavez St/ Evans Ave	PM	F (1.67)	F (1.82*)	80
Alanna Way/ Harney Way	PM	C MID	D D	34.4 33.1 40.5 35.2
Harney Way/ Jamestown Ave	PM	B MID	B B	11.5 11.4 12.6 13.3

Source: Korve Engineering, Inc. – June 2004.

Note:

The numbers in parenthesis represent the Volume/Capacity ratios for intersections expected to operate at LOS E and F.

Impacts are identified in bold.

* V/C ratio for LOS E and F conditions.

** Congestion levels too heavy for delay calculation to be meaningful.

would be considered to have a significant unavoidable impact since no mitigation is available to improve LOS to an acceptable level.

In addition, the freeway segment of northbound US 101 south of I-280 would be considered a significant and unavoidable impact as no feasible mitigation is available.

CUMULATIVE TRAFFIC IMPACTS

Of the six intersections that would operate at LOS E or F in 2025 with the Project, the project's effects at all six intersections would be considered a substantial significant contribution to cumulative impacts:

- Third Street/Cesar Chavez Street;
- Third Street/Evans Avenue;
- Bayshore Boulevard/Paul Avenue;
- Bayshore Boulevard / Silver Avenue;
- Bayshore Boulevard /Industrial Way; and
- Cesar Chavez Street /Evans Avenue.

TRANSIT IMPACTS

The Project would generate approximately 15,388 new transit trips (10,620 inbound; 4,768 outbound) new transit trips on a typical weekday and 1,344 trips (203 inbound; 1,141 outbound) during PM peak hour. The majority of the transit trips would be generated by the Candlestick, Health Center and the Hunters Point Shoreline Activity Nodes.

MUNI Impacts

As presented in Table III.D-6, there would be a net increase of 858 MUNI riders during the PM peak hour within the Project Area for the future baseline conditions (the difference between 2025 Baseline and Project Scenario). Of these new trips, 547 (253 inbound, 294 outbound) would cross the north screenline, 284 (150 inbound, 134 outbound) would cross the west screenline and 27 (13 inbound, 14 outbound) would cross the south screenline. Those MUNI trips were distributed to the screenlines; the estimated MUNI ridership also includes transfers to the regional transit

carriers, such as AC Transit, Golden Gate, SamTrans and BART. Transfers to Caltrain are considered to be local MUNI trips, and therefore, were not assigned to the screenlines.

MUNI capacity in 2025 assumes the following service changes:

- MUNI LRT extension from South of Market area to Chinatown
- Discontinuation of MUNI bus line 15

Table III.D-6 shows that all MUNI bus lines would operate substantially below capacity for both inbound and outbound directions, except the west screenline in the inbound direction.

TABLE III.D-6
MUNI PM PEAK HOUR SCREENLINE ANALYSIS -2025 BASELINE AND 2025 PROJECT SCENARIOS

MUNI Screenline	2025 Base Scenario ¹						2025 (Project) ²					
	Ridership		Capacity		Capacity Utilization		Ridership		Capacity		Capacity Utilization	
	To	From	To	From	To	From	To	From	To	From	To	From
North	451	669	1,869	1,806	24%	37%	919	1,199	1,869	1,806	49%	66%
West	457	434	1,512	1,638	30%	26%	591	584	1,512	1,638	39%	36%
South	209	166	1,428	1,428	15%	12%	289	226	1,428	1,428	20%	16%
Subtotal	1,117	1,269	4,809	4,872	23%	26%	1,799	2,008	4,809	4,872	37%	41%
TOTAL	2,386		9,681		25%		3,807		9,681		39%	

Note:

1. 2025 Baseline Scenario project trips represent the model's growth from Scenario 2000 to 2025 Baseline, multiplied by a factor of 1.035 for the PM peak hour.
2. 2025 (project) trips represent the increase from Scenario 2025 Baseline to 2025 + Project.

Regional Transit Impacts

Regional transit trips were assigned to the regional screenlines based on their trip origins and destinations. Over 31,000 transit trips currently cross the three regional screenlines. More than half (69 percent) of transit trips cross the East Bay screenline, with approximately 82 percent of these trips on BART. Approximately 3,890 trips cross the North Bay screenline, mostly on the Golden Gate Transit buses. Approximately 5,840 trips cross the South Bay screenline, with

approximately 54 percent of these trips on BART. All regional transit providers currently operate at less than their design capacity (meaning seats are generally available), except BART in the East Bay Corridor. BART East Bay corridor would operate at 120 percent capacity, which would near its capacity threshold of 135 percent.

Regional transit impacts could affect AC Transit, BART, Golden Gate Transit, Caltrain, SamTrans, and three ferry systems. With the Project, there would be a net increase of 48 regional transit trips (28 inbound and 20 outbound). The primary origin and destination regions would be the East Bay and the South Bay. These 48 new trips would have a negligible effect on regional transit capacity (substantially less than 1 percent); the Project would not have a significant adverse impact on regional transit service.

PEDESTRIAN IMPACTS

The Project would generate approximately 2,210 net new pedestrian trips on a typical weekday during PM peak hour. As most of the streets in the Study Area have sidewalks and the estimated pedestrian trips would be dispersed throughout the Project Area, no significant pedestrian impacts would be expected. It is anticipated, however, that there would be a moderate increase in pedestrian trips at the crosswalks near the LRT stations along Third Street. This increase would not impact the operations of the existing crosswalks. It should be noted that currently, however, several streets on the west side of Third Street do not have complete sidewalks and crosswalk painting is faded.

BICYCLE IMPACTS

The Project would generate approximately 79 new bicycle trips on a typical weekday during the PM peak hour for the Study Area. There are currently eight bicycle routes in Bayview Hunters Point, one of which has designated bicycle lane (Route 68) and one of them has wide curb lanes (Route 7). As these 79 bicycle trips would be dispersed throughout the Project Area during the PM peak hour, no significant pedestrian impacts would be expected.

PARKING

A parking demand analysis used the methodology established in the *SF Guidelines*. The Project would generate demand for approximately 9,150 to 10,630 parking spaces, of which 6,621 would

be long-term parking (4,070 to 5,550 for residential uses and 2,551 for non-residential uses) and 2,530 would be short-term parking.

It is anticipated that specific development would meet *Planning Code* parking requirements. As presented in the Setting, sections of the Project Area have available parking. In general, parking is more constrained in portions of the industrial areas and along Third Street.

LOADING

Loading demand was estimated based on the methodology presented in the *SF Guidelines*. The Project would generate a demand for approximately 32 loading spaces during an average hour and 40 spaces during the peak hour. It is recommended that the Redevelopment Agency, Planning Department, and Municipal Transportation Agency establish procedures and requirements for detailed operational level analysis as specific development projects advance through the City's review process.

GOODS MOVEMENT

The amount of truck trips in 2025 would be approximately 77 during the average hour and 96 during the peak hour. It is anticipated that these trucks would use major arterials such as Third Street to access the freeways and industrial and retail destinations in the Project Area. Therefore, these roads will experience additional truck traffic.

CONSTRUCTION IMPACTS

Potential construction impacts for individual developments in the Project Area due to implementing the Project are not considered significant as they are temporary and of short-term duration. The City of San Francisco has established requirements and procedures for construction projects. Specific impacts for each development would be analyzed on a project-by-project basis.

NOTES — Transportation

- ¹ This section is based on *Bayview Hunters Point Redevelopment Plan EIR Traffic/ Transportation Report*, August 2004. This report is on file and available for public review at the Planning Department, 30 Van Ness Avenue, fourth floor.
- ² The Study Area TAZs are 653, 656, 661, 662, 663, 664, 666, 669, 706, 707, 711, 712, 713, 714, 724, 725, 727, 744, 746, and 766, which includes a TAZ that primarily covers the Central Waterfront and one that covers Port property. The excluded TAZ for Hunters Point Shipyard is 726.

E. VISUAL QUALITY

This section describes the existing visual character of the Project Area and the individual activity nodes, including important views and distinctive visual landmarks. Visual quality in an urban setting is comprised of elements such as building scale, height, architectural features and materials, patterns of buildings along street frontages, and views of public open space or plazas or of more distant landscape features such as hills, the Bay or built landmarks, such as bridges. These elements help define the sense of place in an urban context.

SETTING

VISUAL AND URBAN DESIGN QUALITIES OF THE PROJECT AREA

Bayview Hunters Point consists of visually heterogeneous neighborhoods located in the southeastern quadrant of San Francisco, surrounded by the Visitacion Valley to the south, Bernal Heights to the northwest, and Hunters Point Shipyard and the San Francisco Bay to the east. The area has distinct visual boundaries and surroundings, such as Cesar Chavez Street to the north and the US 101 freeway to the west. The most prominent visual landmarks in the Project Area are San Francisco Bay to the east and the hills, including Hunters Point Hill and Silver Terrace Hill in the approximate center of the Project Area, and Bayview Hill to the south. Within these boundaries are single-family houses, apartment buildings, parklands, undeveloped properties, and a wide variety of retail and commercial buildings, and industrial warehouses and structures. Third Street, a major corridor, is in the natural valley created by Hunters Point Hill and Silver Terrace Hill.

The topography is composed of flat areas and undulating slopes interspersed with tree-covered hills. Bayview Hunters Point often has the mildest, clearest weather in the city. As the name Bayview implies, there are numerous views of San Francisco Bay throughout the area.

Most of the Project Area's man-made environment is sited on flat or gently sloped areas. Industrial development is primarily located in an east-west band, as well as in flat areas, near

the freeways, and along portions of the waterfront. There are residential land uses from the crests of the hills to the waterfront. Silver Terrace Hill and Hunters Point Hill are developed with residences, while Bayview Hill's crest is undeveloped Recreation and Park Department land.

The flatter portions of the Project Area have a street grid that is offset from the adjoining street grids of Vistacion Valley and Bernal Heights. The street grid is oriented in a northwest/southeast direction, roughly parallel to Hunters Point Hill. Third Street is aligned in a northeast/southwest angle from that street grid, creating a number of triangular-shaped lots.

The Project Area is characterized by low- to medium-density urban development of two to four stories tall. It is an urban landscape with buildings of various sizes, styles, and ages, and wide arterial roadways, as well as narrow neighborhood streets. There are elevated freeways, large commercial signage, overhead utility lines, railways, rail yards, a wastewater treatment plant, and the Hunters Point Power Plant. Some natural open space and parks in Bayview Hunters Point include Bayview Playground, Bayview Park, Hunters Point Shoreline Park, many smaller neighborhood parks, and the Candlestick Point State Recreation Area at the southern end of the area. The predominant impression of Bayview Hunters Point is a residential clusters interspersed within low-lying industrial buildings with vacant lands adjacent to the bay.

The Project Area has a number of contrasting visual features. Vertical industrial elements, such as cement plants, electrical transformers, the Hunters Point Power Plant, Port of San Francisco cargo cranes, and the Hunters Point Shipyard crane within or adjacent to the Project Area, contrast with low and large-scale horizontal structures, including the three-block-long US Postal Service building along Evans Avenue (within the IBIP Redevelopment Area), the full block warehouse structures around the produce terminal, and the elevated I-280 and US 101 freeways. Together, the industrial elements found primarily in the low-lying portions of the area contrast with the low-density residential neighborhoods that surround them.

Eastward views from upper Quesada Avenue, for example, include brightly painted houses that recede down the slope in a repetition of rooflines. This view is punctuated by the occasional church steeple and is framed by distant views of the bay. At the southern edge of the Project Area is Candlestick Park Stadium, a large structure that rises out of a broad parking lot and is nestled against Bayview Hill.

VISUAL AND URBAN DESIGN SETTING BY ACTIVITY NODE

The following section discusses the visual setting of the activity nodes contained within the Project Area.

Northern Gateway Activity Node, including IBIP and BIT areas

The Northern Gateway Activity Node is a flat area in the northwest Project Area that primarily features heavy and light industrial uses, with some community amenities such as a neighborhood shopping center. The northernmost portion of the Northern Gateway Activity Node is bounded by a major arterial, Cesar Chavez Street. The eastern boundary is Port of San Francisco land, the IBIP, and the BIT Project. On the western boundary are the Caltrain tracks. The area north of Islais Creek is composed of large-scale warehouses and industrial buildings. These buildings dominate the street view. Generally, buildings are one or two stories in height, with long street frontages and large surface parking lots. Some buildings lack standard urban amenities such as landscaping and pedestrian sidewalks.

Within the IBIP are one- and two-story commercial and industrial structures. The buildings are surrounded with landscaped setbacks and the sidewalks are lined with trees. Bayview Plaza contains retail, office and light industrial tenants and warehouses. The landscaping along this portion of Third Street contrasts with the dominant industrial tone of the surrounding area. The US Postal service building in the IBIP is one of the largest buildings in this area, on almost three standard city blocks. Some of the area's buildings lack typical urban amenities, such as landscaping and sidewalks.

Within the BIT, the west side of Third Street contains one- to two-story industrial warehouse structures. Most of the commercial businesses along Third Street follow the pattern seen throughout the Third Street corridor – older, architecturally diverse buildings, either wood-sided Victorians or newer stucco-finished buildings, adapted to commercial use on the street level with offices or residences above. However, the street wall in the Northern Gateway Activity Node is less consistent and broken up by frequent surface parking lots.

Views

From Islais Creek Channel, there are views to the west of I-280, US 101 and the residence-covered hills of Bernal Heights and beyond to Sutro Tower near Twin Peaks. North of Islais Creek Channel, at the street intersections are occasional views of the Bay to the east and the residence-covered Potrero Hill to the north. Because of the relatively low height of industrial buildings, residences in the immediate surrounding hill areas have views over these buildings to the Bay and the East Bay hills, and some northerly views of downtown San Francisco and the Bay Bridge. The long-range view to the south, down Third Street, includes San Bruno Mountain south of the city. The westerly view includes Silver Terrace Hill and Bernal Heights. The northern view at Third Street includes a view of the upper portion of the Bay Bridge towers near Yerba Buena Island. The eastern view includes intermittent views of the Bay; near Islais Creek are views of the Port of San Francisco South Container Terminal cranes and long distance views of the East Bay.

Visual Landmarks

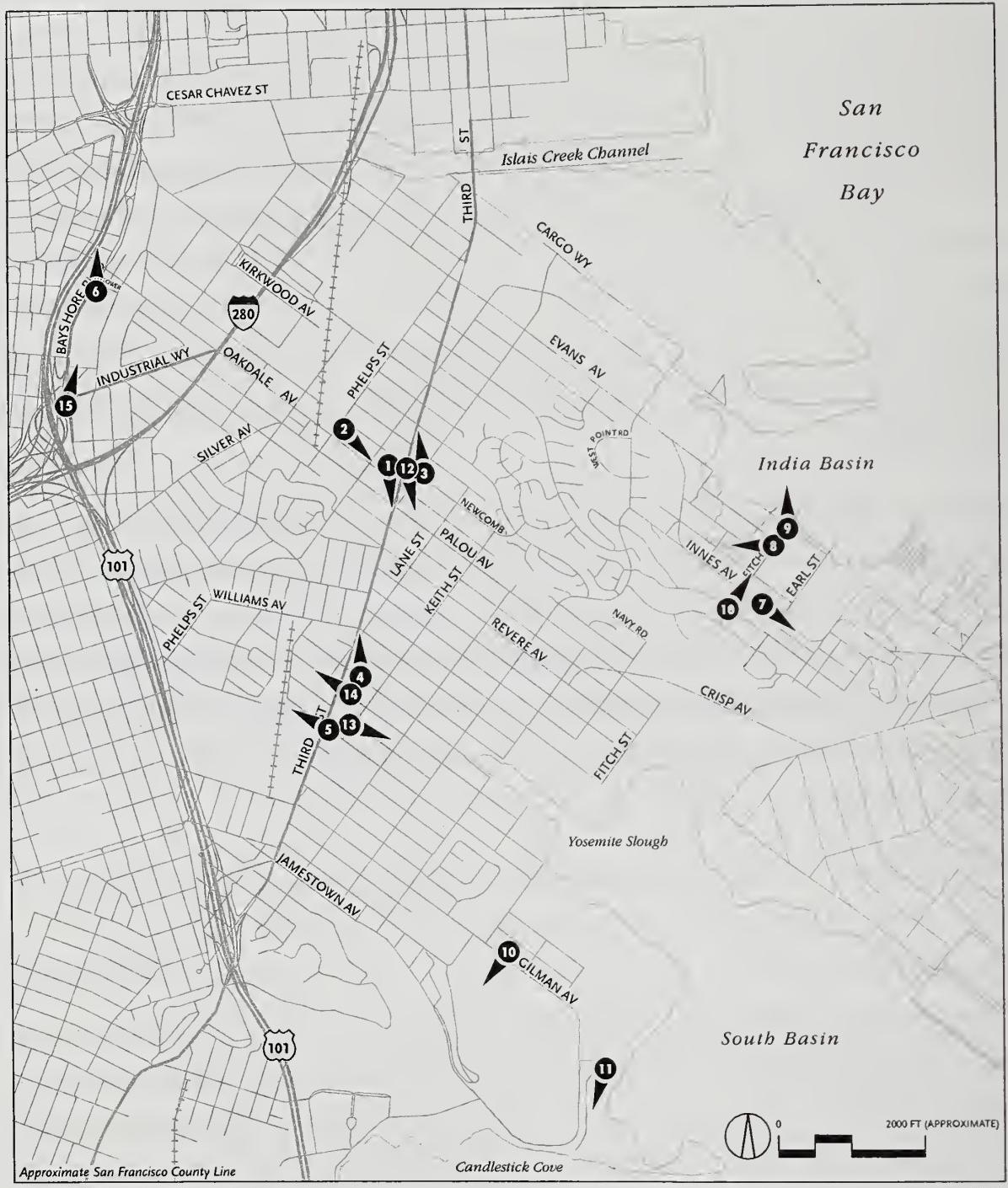
A major visual feature of the activity node is Islais Creek Channel, and the Southeast Water Pollution Control Plant west of Third Street and south of Evans Avenue. The plant includes 16 large cylinder-shaped tanks, which are approximately 50 feet in diameter and 50 feet in height, generally concealed behind a masonry wall. Islais Creek Channel shoreline is accessible to the public in only a few locations. The Islais Creek Bridge is a distinctive Art Deco-style drawbridge.

Town Center Activity Node

The Town Center Activity Node is the historic retail core of Bayview Hunters Point. This activity node is in the valley between Silver Terrace Hill and Hunters Point Hill. Third Street has traditionally been a major trucking route lined with tall wooden utility poles and overhead wires, and limited landscaping. The Third Street LRT, currently under construction, will substantially change the visual character of Third Street with the addition of rail lines and station platforms in the median of the street, and numerous streetscape improvements and amenities (see III.D, Transportation). A station platform and related pedestrian improvements are planned at the intersection of Third Street and Oakdale Avenue within the Town Center Activity Node.

Third Street is fronted with two- and three-story stucco or wood-sided buildings. These buildings usually have retail on the street level and residences and the occasional office on the upper floors (see Figure III.E-2, p. III.E-7). (Figure III.E-1 shows the location of photographs used to illustrate the activity nodes.) There are a number of vacant storefronts and underutilized buildings along this section of Third Street. The diagonal orientation of Third Street, with the resulting angle of the cross streets, lends itself to a variety of architectural corner treatments.

Residential areas are found near the neighborhood commercial zones on either side of Third Street. The streets are flanked with sidewalks and rows of single-family houses, two and three stories in height and finished in stucco or clapboard. The residential areas are a blend of architectural styles, ranging from 1890s Victorians, to modern apartments with ground-floor garages. A feature of this activity node is the conversion of many mid-block houses into churches (see Figure III.E-2, p. III.E-7). Landscaping is limited, with the occasional street tree and grass or shrubbery in front yards. At Quesada Avenue, on the west side of Third Street, the center street median is planted with palm trees, a unique feature in the area.



SOURCE: EIP Associates, Clement Designs

10-12-04

10 ► Symbol indicates viewpoint number and direction of photo view

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-1 VIEWPOINT LOCATION MAP



VIEW SOUTH ON THIRD STREET AT NEWCOMB AVENUE (Location 1)



VIEW SOUTHEAST ON OAKDALE AVENUE BETWEEN PHELPS STREET AND NEWHALL STREET (Location 2)

SOURCE: Stevens Associates

8-5-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-2 VIEWPOINT LOCATIONS 1 AND 2

Views

The southern long-range view down Third Street includes Bayview Hill. The east view includes Hunters Point Hill. The northern view at Newcomb Avenue includes a clear view up Third Street to the Bay Bridge, Yerba Buena Island, and Port of San Francisco working cranes (see Figure III.E-3). The western views include I-280 and Bernal Heights beyond.

Visual Landmarks

A prominent visual landmark in the activity node is the Bayview Opera House Plaza, which contains the historic Bayview Opera House (formerly known as the South San Francisco Opera House) (see Figure III.E-8, p. III.E-24). This two-story Victorian hall is an example of other buildings from the late 1800s and early 1900s that are scattered throughout Bayview. The Bayview Opera House is used as a community and cultural center.

Adjacent to the plaza is the Joseph Lee Recreation Center. Other features are the Community College of San Francisco Southeast Campus at Oakdale and Phelps Streets and Southeast Community Facility, two blocks west of Third Street at Newcomb Street and Phelps Street. These facilities are housed in modern glass and concrete structures.

Health Center Activity Node

The Health Center Activity Node, centered on Third Street, is composed largely of light industry with limited public amenities (such as bus shelters, benches, or parks) and some residences. The Southeast Health Center, the only medical clinic in Bayview Hunters Point, is located on the corner of Keith Street and Armstrong Avenue, directly adjacent to the Bayview Playground and one block away from Third Street (see Figure III.E-9, p. III.E-25). The one-story, brick-façade clinic is landscaped with grass and trees and is surrounded on three sides by small industrial warehouses.

This activity node is in a state of transition, as former heavy industrial and warehouse uses are giving way to smaller industries, office use conversions, and some new residential development. This area has national chains such as a Walgreen's drugstore and a McDonald's



VIEW NORTH ON THIRD STREET AT NEWCOMB AVENUE (Location 3)



VIEW NORTH ON THIRD STREET AT ARMSTRONG AVENUE (Location 4)

SOURCE: Stevens Associates

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Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-3 VIEWPOINT LOCATIONS 3 AND 4

restaurant on Third Street. There is a recent five-story senior housing development at Armstrong Avenue and Third Street (see Figure III.E-3). This area of Third Street contains a greater mix of residential and commercial structures and buildings than many other sections of Bayview Hunters Point. Beyond the Third Street corridor, with the exception of the playground and clinic, the active uses have remained industrial with some empty buildings available for adaptive reuse.

Views

Long-range views to the south from Third Street are of San Bruno Mountain. Long-range western views include Twin Peaks and the Sutro Tower. West of the Caltrain tracks, the mid-range views include the Portola Place housing development at Carroll Avenue (see Figure III.E-4) and housing on Silver Terrace Hill.

Visual Landmarks

The Bayview Playground and Martin Luther King, Jr., Pool, at Third Street and Carroll Avenue, are visual landmarks and community amenities. They also provide a buffer between industrial development to the east and mixed uses on Third Street. There is a prominent mural with African American themes painted on the northern side of the building at Carroll Avenue and Third Street.

Oakinba Activity Node

The Oakinba Activity Node, in the northwest section of the Project Area, contains light industrial uses and retail uses, with some residential uses south of Industrial Way and the elevated highway structure at I-280. Development density here is higher than in the Northern Gateway Activity Node. There are fewer parking lots and less open space. Most of the buildings are one- and two-story industrial structures at least 20 feet in height. Since this area is geared towards larger-scale retail and industries that transport products via trucking, there are limited pedestrian streetscape amenities such as street trees. The Caltrain tracks traverse



VIEW WEST FROM THIRD STREET AND CARROLL AVENUE (Location 5)



VIEW NORTH ON BAYSHORE BOULEVARD AT FLOWER STREET (Location 6)

SOURCE: Stevens Associates

8-5-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-4 VIEWPOINT LOCATIONS 5 AND 6

the neighborhood in a north-south direction. The tracks run through the industrial area and tunnel under the Silver Terrace residential area to the south.

This activity node contains a variety of industrial businesses, ranging from large food distributors and wholesalers to small graphic art studios. There are warehouses, showrooms, open storage facilities, and manufacturing plants. The businesses in this area range from recycling yards, to the San Francisco Unified School District's maintenance buildings, to numerous building material wholesalers, building trade fabricators, and small manufacturing businesses. In addition, there are car and truck repair uses and a business park located in this activity node.

The western edge of the Oakinba Activity Node is the six-lane Bayshore Boulevard (see Figure III.E-4). It also is the activity node's primary location for restaurants, fast food businesses, and retail uses. While some businesses have off-street parking, many depend on street parking. There is a mix of new and old development, and limited formal landscaping, except for the occasional street tree. There are large lots at the corner of Industrial Way and Bayshore Boulevard, as well as vacant buildings along both sides of Bayshore Boulevard. Along the east side of Bayshore Boulevard between Industrial Way and Oakdale Avenue is a range of larger retail home improvement and building supply business, fast-food restaurants, and some vacant buildings. Bayshore Boulevard is identified as a truck route, in the 1995 City of San Francisco Truck Route Plan. Even though this street does have sidewalks, the concentration of traffic can create a deterrence for pedestrians.

Views

The Oakinba Activity Node is framed by Bayshore Boulevard and US 101 on the west and I-280 on the east and south. The northern boundary is Cesar Chavez Street. Views in the area are limited to the elevated freeways and the hills of Bernal Heights and Potrero. The wooden utility poles and the network of wires frame the background view of Bernal Heights, a hill topped with open space above single-family development. The view at Potrero also includes a large public housing project. Views through the activity node are generally limited due to the flat topography, and irregular street grid, which blocks long corridor views.

Visual Landmarks

There are two dominant forms in the activity node: block-long warehouses and the elevated freeway structures of US 101 and I-280. The warehouses are apparent from all roadways in the activity node, and the freeway structures are visible from many points.

South Basin Activity Node

The South Basin Activity Node is primarily an east-west band of smaller-scale industrial buildings with single-family residences at the north and south ends. The majority of this activity node is a flat valley at the foot of Bayview Hill. The eastern boundary is San Francisco Bay and Yosemite Slough. The northern and southern borders consist of low, rolling hills with trees and single-family houses.

This portion of Third Street is in a state of transition, with the former heavy industrial and warehouse uses giving way to smaller industries, office use conversions, and some new residential development. Buildings along this portion of Third Street are without ornamentation, and there are several underused and empty buildings. The Paul Avenue Caltrain stop is in the activity node, west of Third Street.

The residential area is mainly located on the east side of this activity node. Wide streets are flanked with sidewalks and rows of single-family houses, two and three stories in height and finished in stucco or wood siding. The prevailing residential style is the typical San Francisco walk-up (house over the garage), on a 25-foot-wide lot with no side yard or front yard. Many of these wide streets serve as both a southern gateway to Hunters Point Shipyard and a western approach to Candlestick Point, and some residential streets often serve as cut-through trucking routes.

The area around Yosemite Slough and the Bay is largely industrial, with no major buffers between the industrial activities and surrounding residences. Surrounding Yosemite Slough and the shoreline are recycling operations, metal fabrication shops, and scrap yards. Many streets east of Ingalls Street between Carroll Avenue and Thomas Avenue are currently unpaved.

Views

The southern long-range view, particularly down Third Street, includes San Bruno Mountain, Bayview Hill, and, in the eastern side of the activity node at Yosemite Slough, Candlestick Park Stadium and the San Mateo Bridge. The western view (especially west of Third Street) includes Twin Peaks, Sutro Tower, and Mount Davidson. The western mid-range views include the newer Portola Place and Silver Terrace Hill residential development. The northern view at Yosemite Slough includes Hunters Point Shipyard, the Port of San Francisco cranes, and a long-range view of the Bay Bridge, downtown San Francisco, and, with clear visibility, Alcatraz Island. Mid-range views to the east at Yosemite Slough include the Bay, and long-range views include the East Bay hills.

Visual Landmarks

Prominent elements on the west side of Third Street include the structure of the currently vacant Coca-Cola bottling plant at Carroll Avenue and the former Macy's warehouse.

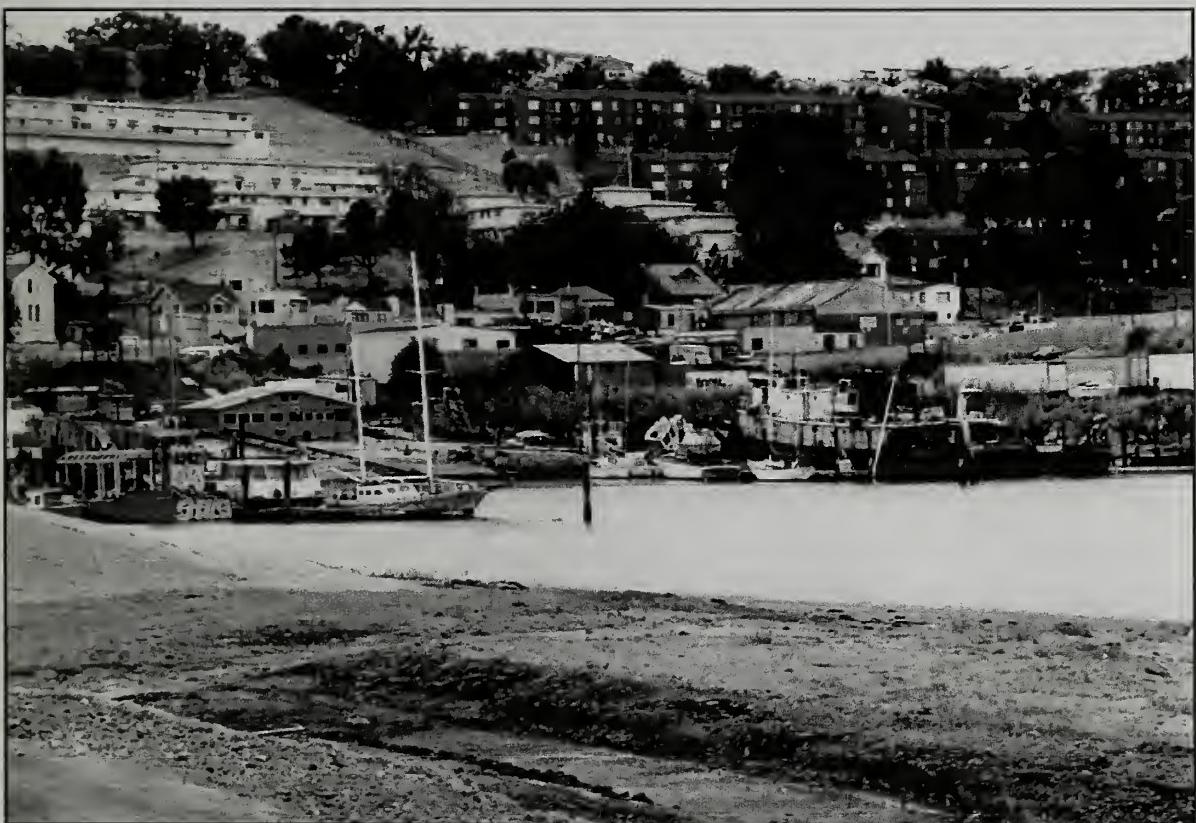
Hunters Point Shoreline Activity Node

This activity node includes Hunters Point Hill that terraces down to the Bay (see Figure III.E-5) to the west, Hunters Point Shipyard to the south, India Basin and Pier 98 to the northeast, and IBIP on the north. The activity node includes heavy and light industry, public open space along the Bay, and undeveloped land. Residential areas are located along Innes Avenue and on Hunters Point Hill (see Figure III.E-5).

Evans Avenue/Hunters Point Boulevard/Innes Avenue is the major access route to this area from Third Street. This route also serves as the northern gateway to Hunters Point Shipyard. The road passes by the 35-acre Hunters Point Power Plant, the 13.5-acre undeveloped site known as the Ferrari property, the 11.4-acre India Basin Shoreline Park, some single-family residences, several small-scale, light industrial businesses, artist studios, commercial establishments, and small-boat maintenance uses (see Figure III.E-5). The Albion Water Company and the Our Lady of Lourdes Church are notable historic landmarks in this area.



VIEW SOUTHEAST ON INNES AVENUE IN INDIA BASIN VILLAGE (Location 7)



VIEW WEST FROM NORTH END OF FITCH STREET (Location 8)

SOURCE: Stevens Associates

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-5 VIEWPOINT LOCATIONS 7 AND 8

India Basin Shoreline Park contains open space, restored wetlands, and some recreational amenities. Heron's Head Park is a notable open space project in the area.

Views

Views to the northeast from the hills and along the waterfront include San Francisco Bay and the East Bay Hills, with foreground views of the Port of San Francisco South Container Terminal, (see Figure III.E-6) and the Hunters Point Power Plant. Views from the undeveloped Ferrari site include Hunters Point Hill as well as the bay. Residences on the east side of Hunters Point Hill have views of the India Basin Shoreline Park, the Hunters Point Shipyard and the Oakland-San Leandro hills. (see Figure III.E-12, p. III.E-31)

Views to the east include the Port of San Francisco's South Container Terminal at Piers 80-96. These piers service containerized cargo ships and provide storage facilities. The many large low-lying warehouse buildings contrast with the verticality of the port cranes.

Visual Landmarks

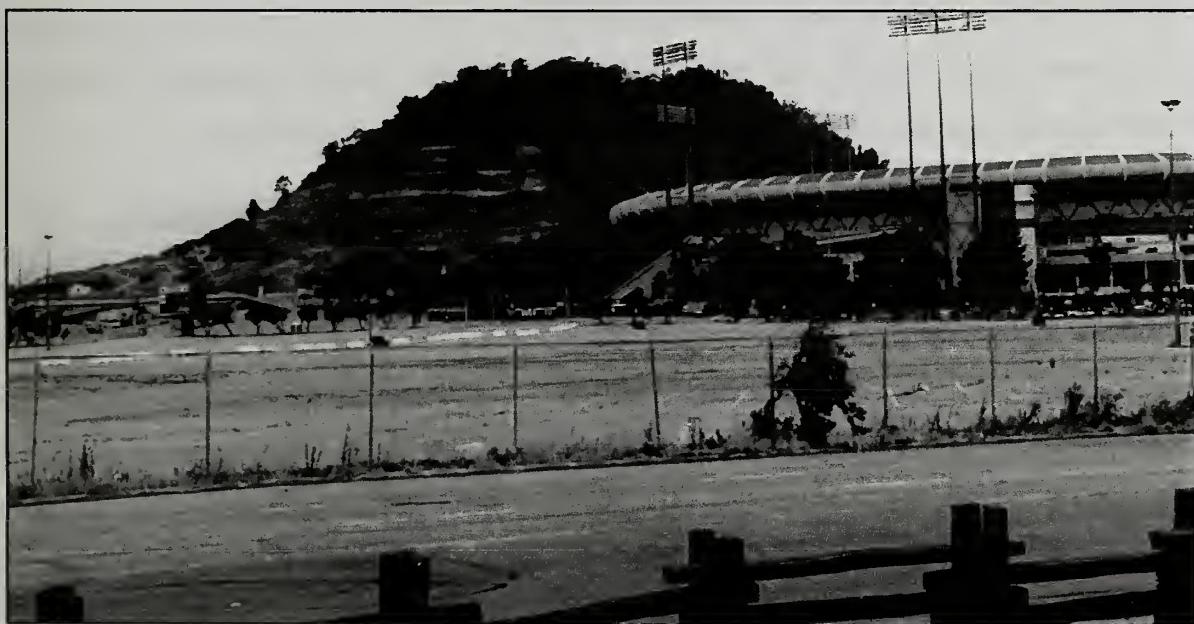
A visual landmark in the activity node is the Hunters Point Power Plant, consisting of a tall structure and chimneys that dominate the skyline. Other visual features include the 60-foot-high cement plant seen from the shoreline.

Candlestick Point Activity Node

The Candlestick Point Activity Node is a flat area at the base of Bayview Hill extending to the waterfront; the activity node encompasses the 350-acre Candlestick Point Special Use District and a portion of the Candlestick Point State Recreation Area. This activity node contains four square blocks of industrial uses near stadium facilities, parking areas, and state recreation area.



VIEW NORTH ON AURELIUS WALKER DRIVE (Location 9)



VIEW SOUTHWEST ON GILMAN AVENUE (Location 10)

SOURCE: Stevens Associates

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Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-6 VIEWPOINT LOCATIONS 9 AND 10

Views

Views of San Francisco Bay are available from many points in this activity node. Long-range views of the East Bay hills are available to the east and southeast, while the Cow Palace and San Bruno Mountain are visible to the west and southwest. To the northeast, across South Basin and Yosemite Slough are medium-range views of Hunters Point Shipyard, with the Bay Bridge and the downtown San Francisco skyline beyond.

Visual Landmarks

The visual landmarks in this activity node include Candlestick Park and Bayview Hill (see Figure III.E-6). Candlestick Park is the existing 70,000-seat stadium, surrounded by approximately 9,200 paved parking spaces. The stadium is about 120 feet tall with a ring of nine light standards that rise up to 240 feet.

Bayview Hill is the most prominent natural topographic feature in Bayview Hunters Point. The hill is visible from North Beach in the northeast corner of the city and from Twin Peaks and Diamond Heights to the west. The upper portion of the hill is a tree-covered park and the southern lower slopes include residential development. The vertical topography of Bayview Hill contrasts with the horizontal concrete and steel bowl shape of the stadium.

Candlestick Point State Recreation Area, on the eastern edge of this activity node, consists of 176 acres and covers over three miles of San Francisco Bay shoreline, from the south side of Yosemite Slough southward along the shoreline to the intersection of Harney Way and Executive Park Boulevard. The center portions of the park are landscaped with well-established stands of trees and shrubs separated by large turf areas and walkways (see Figure III.E-7). The northern and southern ends are generally unimproved with little to no landscaping or other amenities. The undeveloped portions of the park, some 103 acres, are used for parking on game days.



VIEW WEST ON PAVED SHORELINE TRAIL IN CANDLESTICK POINT STATE RECREATION AREA
(Location 11)

SOURCE: Stevens Associates

8504

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.E-7 VIEWPOINT LOCATION 11

Candlestick Point State Recreation Area offers recreational opportunities, including dirt and paved pedestrian trails, a launching area for windsurfers, a boat launch, a fishing pier and ferry dock, an informal putting green, picnic facilities, paved parking lots, and bathrooms with showers. A paved shoreline trail runs the length of the park and is part of the Bay Trail Project.

IMPACTS

SIGNIFICANCE CRITERIA

For the purposes of this EIR, the Project would be considered to have a significant effect on the environment if it would:

- Substantially degrade or obstruct publicly-accessible scenic views;
- Substantially degrade the existing visual quality of the area, or result in a substantial, demonstrable negative aesthetic effect; or
- Generate obtrusive light or glare that would adversely affect or substantially affect other properties.

Artificial lighting can be classified as “spill light,” “obtrusive,” or “glare.” Spill light is light that falls on off-site receptors and causes additional nighttime illumination at these locations. Obtrusive light is a form of spill light that can cause annoyance or distraction to the viewer because of its contrast to the background. Glare is a form of obtrusive light caused by an excessively bright source resulting in discomfort or loss of vision.

PROGRAM EFFECTS

While not part of the Project, the Third Street LRT project will be the impetus for many of the area-wide streetscape improvements that are a part of the Project. The under-construction Third Street LRT project will have a substantial visual impact on the area, with the addition of station platforms, street trees, pedestrian lighting, street furniture, street-level trackage, overhead wires, and other visible improvements to Third Street.

Impacts Related to the Economic Development Program

The overall visual impression of the Project Area would change subtly as street trees and greenery are added, infill development is completed on various sites, the Hunters Point Power Plant is eventually replaced with less visually dominant mixed-use development, and certain Port and State lands along the shoreline are converted to public park uses.

The Project would emphasize redevelopment in the activity nodes. The potential visual impacts of the Project are described below by activity node. Lighting is addressed below with regard to the entire Project Area. Additional lighting issues specific to the Candlestick Point Activity Node are addressed in that activity node discussion.

Lighting Impacts Throughout the Project Area

The mixed-use development of vacant parcels and unused buildings with infill development would create new sources of light, particularly as residential uses are added to Third Street, and as transition areas are created between exclusively industrial areas and mixed use areas. As the Project envisions fostering development that takes advantage of the Third Street LRT, and a 24-hour community (office and commercial during the day, and residential at night), the mixed-use areas would be likely to add nighttime lighting including security lighting. These new sources of light would be typical of urban development elsewhere in San Francisco and would not generate obtrusive lighting that would be substantially visible from other neighborhoods. This impact would be considered less than significant.

Northern Gateway Activity Node, including BIT and IBIP areas

Economic development in the Northern Gateway Activity Node, including the IBIP and BIT Redevelopment Project Areas, would focus on mixed-use projects along Third Street, including new residential development that would take advantage of the transit-oriented development opportunities presented by the new Third Street LRT. Land to the east and west of the Third Street corridor in the Northern Gateway Activity Node would retain industrial land use controls, with residential and new office uses prohibited.

Scenic Views and Urban Design

The existing and proposed building heights in the Northern Gateway Activity Node would range from 40 feet (in the southwest portion) to 65 feet (through the middle and northwest portion) to 80 feet (in the northeast and northern portion). Existing buildings in these height and bulk districts are typically below these height limits. On Third Street, the Project would allow heights up to 55 feet in existing 40 feet height districts. This would increase some building height on Third Street by about 15 feet. Other height districts would remain the same. Infill development built to these allowable heights would be somewhat taller than adjacent development but would generally be comparable with the overall height and bulk and volume of existing buildings in the area. Scenic views in this activity node and area are provided along major corridors, including Third Street. As new mixed use development would be generally consistent with existing development with regard to height and scale, scenic views would not be obstructed. Renovation and rehabilitation of existing structures along Third Street would contribute to enhanced visual quality. The Project would also contribute to separating industrial uses from mixed use and residential uses providing increased visual coherence. This impact would be considered beneficial.

Town Center Activity Node

The Town Center Activity Node would be a commercial area with smaller scale mixed-use, transit-oriented development, primarily on Third Street between Jerrold Avenue and Williams/Van Dyke Avenues. In addition, residential uses would be focused on properties that are not adjacent to Third Street. Community-serving uses would be anchored by the Town Center block, bounded by Third Street, Newcomb Avenue, Lane Street, and Oakdale Avenue.

Visual changes in this activity node from the proposed Bayview Opera House Plaza Improvements are discussed under the Bayview Connections Urban Open Space Project.

Scenic Views and Urban Design

As shown in Figure III.E-8, the enlarged public space of the Bayview Opera House and the adjacent potential senior housing project would change the spatial relationships around, and views of, the Bayview Opera House. While medium-range views of the opera house would be obstructed, this new development on underutilized lots would not obstruct significant views along major corridors. Compatible new development adjacent to this historic building would be considered a less-than-significant visual impact (see Section III.J, Cultural Resources for a discussion of potential impacts on historic resources).

If infill opportunity sites along Third Street were developed to the maximum height limit of 45 to 65 feet, some northern long-range views of the western span of the Bay Bridge may be lost. Since Third Street in this activity node is at a relatively raised elevation, the southern long-range view of Bayview Hill and San Bruno Mountain would generally not be changed. As a result, implementation of the Project would result in a less-than-significant impact on scenic views or urban design in the Town Center Activity Node.

Health Center Activity Node

The Health Center Activity Node would create a center for affordable senior residences in proximity to medical offices, clinics, and related medical services facilities. The Southeast Health Center (see Figure III.E-9, p. III.E-25) would be expanded to provide additional private medical offices that support the services available through the health center. To provide a complete neighborhood for elderly persons, there would also be a focus on building new housing and encouraging new commercial/retail businesses within this activity node.

Scenic Views and Urban Design

The existing building heights along this portion of Third Street are generally 25 feet or shorter, and infill development of higher-density commercial and other mixed uses would be encouraged to locate along the corridor.



VIEW WITH EXISTING CONDITIONS



VIEW WITH POTENTIAL DEVELOPMENT

SOURCE: Stevens Associates

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

Figure III.E-8 VIEW SOUTHEAST ON THIRD STREET AND NEWCOMB AVENUE (Location 12)



VIEW WITH EXISTING CONDITIONS



VIEW WITH POTENTIAL DEVELOPMENT

SOURCE: Stevens Associates

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Bayview Hunters Point Redevelopment Plan EIR

Figure III.E-9 VIEW EAST ON KEITH STREET (Location 13)

While most of the Health Center Activity Node is developed, there are a few underutilized properties that could be redeveloped in the future. Figure III.E-10 shows the redevelopment potential of an underutilized lot on Third Street. Heights along Third Street would range from 40 to 65 feet tall. While existing buildings are two to three stories tall, new development would be encouraged to be about three to five stories tall. As is shown in the figure, new development would be compatible with existing development and would not obstruct views down street corridors, result in a less-than-significant impact on scenic views and urban design in the Health Center Activity Node. Third Street would become a denser urban area with residential above commercial, office and retail uses. This level of pedestrian and commercial activity would be supported by, and would support the under-construction Third Street LRT.

The Health Center Activity Node would have special sub-district identity landscaping and street treatments in addition to the raised medium platforms, transit shelters, and other transit elements of the Third Street LRT. It is anticipated that these improvements would have a beneficial effect on visual resources in this portion of Third Street.¹

Potential development that would occur is expansion of the Southeast Health Center, visible from Third Street, one block east of the Bayview Playground. The health center is planned to be enlarged by two to three stories (see Figure III.E-9). As the surrounding light industrial buildings and some two-story residences are below 25 feet in height the increased height of the health center would reduce some north/south views from this location. Infill development along the corridor may also block some long-range western views of the Silver Terrace and Bernal Heights hills to the west. Southern views along the corridor, of Bayview Hill and the San Bruno Mountains, would be minimally affected by higher infill development. As existing views are currently only available at certain street intersections and at other limited locations, impacts due to increased height of new development would be considered a less-than-significant impact.



VIEW WITH EXISTING CONDITIONS



VIEW WITH POTENTIAL DEVELOPMENT

SOURCE: Stevens Associates

8-5-04

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Figure III.E-10 VIEW NORTHWEST ON ARMSTRONG AVENUE AT THIRD STREET (Location 14)

Oakinba Activity Node

The Oakinba Activity Node would accommodate larger-scale, city-serving commercial businesses along Bayshore Boulevard. Other areas within the Oakinba Activity Node, not adjacent to Bayshore Boulevard would enhance and augment existing PDR uses. The average building height proposed for this activity node would be similar to the existing limits. Thus, development would be of the same height and bulk as existing development.

Scenic Views and Urban Design

The relatively flat Oakinba Activity Node is bounded by hills and elevated freeways. Notable scenic resources include Bernal Heights and Potrero Hill. Long-range views of downtown San Francisco to the north, and to the east of San Francisco Bay, and to the south are blocked by these hills and the elevated freeway structures. From the eastern edge of the activity node at Oakdale Avenue, there are mid-range views of Sutro Tower. Proposed development on Bayshore Boulevard would be comparable with the overall bulk and volume of existing buildings in the area (see also Figure III.E-4), and would obstruct some long-range views of the hilltops of Bernal Heights and Potrero Hill from some locations (a Home Depot store and parking structure is proposed and is under City review, generally in the location in the view in Figure III.E-11). These changes in views would represent less-than-significant visual effects as the changes would only be visible from some limited locations, and most views would be retained. Existing views across the activity node from residences in Bernal Heights and Potrero Hill would not change as these views, over the activity node's low-height buildings, to the bay and the East Bay hills, and some northward views of downtown San Francisco and the Bay Bridge would be retained.

South Basin Activity Node

The South Basin Activity Node would encourage transit-oriented, mixed-use development adjacent to Third Street to take advantage of the Third Street LRT. Land uses between Third



VIEW WITH EXISTING CONDITIONS



VIEW WITH POTENTIAL DEVELOPMENT

SOURCE: Stevens Associates

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

Figure III.E-11 VIEW NORTH ON BAYSHORE BOULEVARD AT INDUSTRIAL STREET (Location 15)

Street and Bayshore Boulevard would transition from transit-oriented development to industrial uses. Where industrial uses intermix with residential uses, homes would be buffered from industry by adding small-scale neighborhood commercial services, as the opportunity arises.

Scenic Views and Urban Design

The height of new development would be consistent with existing development throughout the South Basin Activity Node. The flat topography of the majority of the South Basin Activity Node results in limited existing long-range views. There are some long-range eastern views of the bay from the easternmost portions of this activity node. Thus, infill development in the majority of the activity node is not anticipated to substantially obstruct views of the bay, as these limited views in the easternmost portion of the activity node would still be available from existing east-west streets. With regard to development on Third Street, the intermittent view of Silver Terrace and Bernal Heights to the west from this activity node would not change. Development of transition or buffer zones between industrial and residential uses would be a beneficial effect of the Project.

Hunters Point Shoreline Activity Node

Public and open space uses would largely replace the industrial uses north of Evans-Hunters Point-Innes roadways. Overlay zoning or a special use district may also be adopted to permit mixed uses in these industrial areas and would encourage bay- and community-oriented uses along the Evans-Hunters Point-Innes roadways. Mixed use development would be allowed along Innes Avenue. As part of the Project, the Hunters Point Power Plant site and the undeveloped Ferrari site would receive overlay zoning to permit mixed-use development.² While other potential infill sites are within this activity node, the redevelopment of these two large, waterfront sites would create the largest sources of visual change.

Scenic Views and Urban Design

If the Ferrari site were developed with low-rise buildings of up to 40 feet (see Figure III.E-12), there would be limited changes in the northern mid- and long-range views



VIEW WITH EXISTING CONDITIONS



VIEW WITH POTENTIAL DEVELOPMENT

SOURCE: Stevens Associates

8-5-04

Bayview Hunters Point Redevelopment Plan EIR

Figure III.E-12 VIEW NORTHEAST ON NORTHRIDGE ROAD AT DORMITORY ROAD (Location 16)

from residents of Hunters Point Hill or visitors to India Basin Shoreline Park. However, short-range views of the bay from Innes Avenue would be partially obscured by new development on this site.

When the Hunters Point Power Plant ultimately closes (see Section III.P, Energy), the development of this site may obstruct some bay views from the IBIP, and some views from residences on the lower northern slopes of Hunters Point Hill. However, new mixed-use development at this site would likely be constructed at a much lower height than the existing plant, potentially opening up new views of the bay from these areas. In addition, new views of the Bay would be created along shoreline portions of these sites, in the form of publicly accessible waterfront parks and an extension of the Bay Trail. These areas would offer long-range views of the East Bay hills to the east, the Bay Bridge and Treasure Island, and the downtown San Francisco skyline to the north. As a result, views of and access to the bay would be enhanced as part of the redevelopment of these large opportunity sites.

Candlestick Point Activity Node

The Candlestick Point Activity Node which accommodates the proposed San Francisco 49ers Stadium Development Retail/Entertainment Center, as called for in Proposition F, passed by the voters in 1997, amended the *General Plan*, *Planning Code*, and Zoning Map and established the Candlestick Point Special Use District. Proposition F restricts the height of the stadium to 200 feet and the mall to 60 feet. The new stadium would be approximately 35 feet taller and approximately 75 feet wider than the existing stadium, but would have a similar oval shape. The ultimate design and placement of the Stadium Development Retail/Entertainment Center structures is not known. After the new stadium is built, the existing stadium would be demolished. The 1.2 million-square-foot retail and entertainment mall would be one to two stories tall, most likely ranging from 40 to 60 feet in height. While the Stadium Development Retail/Entertainment Center would be evaluated in a project-specific EIR, this EIR includes an evaluation of the known height and bulk guidelines of the proposed structures.

Scenic Views and Urban Design

The mass and height of the Stadium Development Retail/Entertainment Center would be greater than those of the existing stadium. The mid- and long-range views of the Project Area would not significantly change from existing viewpoints (see Figure III.E-6). Long-range views of Bayview Hill and the Bay would still be available from surrounding areas. Mid-range views of the new stadium, especially looking north from US 101, would be somewhat changed, as the stadium would be taller and wider, and the mall would be a new feature. From the Shipyard, the new stadium would appear larger and would block some views of San Bruno Mountain. The new stadium would appear only slightly larger from long-range views.

The Stadium Development Retail/Entertainment Center would have the greatest visual impact on short-range views. The new stadium would obstruct scenic views of the Bay looking southeast along Gilman Street. The new mall would block some shoreline and bay views from residences at the St. Francis Bay Condominiums on the southern side of Bayview Hill. The new mall would also change the visual character of the Candlestick Point State Recreation Area, as a portion of the park would be used for parking. These are considered significant, unavoidable visual impacts to scenic views of the Bay. No feasible mitigation measures have been identified to reduce the impacts to scenic views of the bay from the Stadium Development Retail/Entertainment Center to a less-than-significant level.

The removal of the present stadium may improve southern views of the bay from those areas directly north of Candlestick Park. The impact of the new mall on the adjacent neighborhood to the northwest would be limited because the proposed stadium would block views of the new mall.

Lighting

The impact of lighting from the Stadium Development Retail/Entertainment Center would depend on the combination of effects from stadium light towers, scoreboards, parking lot lighting, circulation patterns, the frequency of night games at the stadium, and architectural/perimeter lighting from the entire site. While the existing stadium lighting would be replaced with lighting for the new stadium, the new mall would be an ongoing, new source

of light. The new mall would be open during some portion of the evening, and lights from the mall, the parking lot, and vehicles would represent an unavoidable increase in overall lighting levels. The new mall lights would be seen from numerous vantage points and nearby residential areas. This substantial new source of light could adversely affect adjacent properties, which is considered a significant impact. However, measures that require shielding and indirect light would reduce this impact to a less-than-significant level (see Mitigation Measure 7.)

Impacts Related to Other Programs

About 3,700 housing units are projected within the Project Area. From a visual and aesthetic standpoint, transition zones to buffer mixed-use from residential use would generally soften and balance the industrial character of much of the Project Area. New moderate-density, infill housing units would be built in existing residentially zoned areas and would be expected to match the scale and architectural style of existing housing. As a result, new infill housing would generally blend with adjacent residential development. The overall effect of 200 additional residential units spread throughout the relatively large Project Area would have no discernable affect on scenic views. Lighting levels would increase somewhat throughout the Project Area, but the new sources of light would be typical for urban areas.

Additional lighting, such as new street lights, would be a new source of light throughout the Project Area. The Project contains design guidelines that prescribe the urban design characteristics of new development. These guidelines would stipulate that the use of standard streetlights would direct light downward onto roadways and pedestrian areas for purposes of safety, and would not spill onto adjacent properties.

The Project calls for additional public open space to be created along portions of the Bay shoreline in the Project Area, including the perimeter of Port-owned land north of Cargo Way and State-owned land around Yosemite Slough. The Project also calls for the expansion of the Hunters Point Shoreline Park. The Streetscape Plan would include appropriate landscaping, street furniture, lighting, pedestrian islands, and other uniform features on segments of major roadways such as Third Street in the Town Center Activity Node and portions of Carroll

Avenue near Third Street. Additionally, the Green Streets Program would add appropriate landscape treatments to numerous neighborhood streets. The overall visual effect of these programs would be to soften the industrial character of the Project Area and its major thoroughfares, and increase open space in Bayview Hunters Point. In the long term, shoreline parklands would open up views of the bay that are currently blocked by industrial development or are inaccessible to the public.

New landscape features such as trees may block some views, including those of the Bay. In urban areas trees are considered beneficial visual features when compared to industrial forms that they may replace or screen from view along the shoreline and in other areas. As a result, the visual and aesthetic impacts of the Community Enhancements Program would be generally considered beneficial.

The proposed Façade Renewal Program would maintain and enhance building facades in the Project Area. Although this program could result in impacts to cultural resources (see III.J, Cultural Resources), this program would have a beneficial visual impact on the Project Area .

The Enhanced Framework Truck Route Program would designate truck routes to divert traffic away from residential areas and would physically improve truck routes with landscaping appropriate for truck “parkways.” Streetscape amenities, such as increased lighting, wider sidewalks, and bicycle lanes would create streets that are intended to be safer and more accessible to pedestrians. Although the specific truck routes are not final, it is assumed the new truck routes would have an overall beneficial effect on the visual character of the area. To further divert commercial truck traffic away from residential areas, new bridges have been proposed over Islais Creek at Illinois Street, and over Yosemite Slough. Depending on the final design of the bridges, short- and medium-range views of the bay could be obstructed from areas immediately surrounding Islais Creek and Yosemite Slough. This could result in a potentially significant visual impact. No mitigation has been identified. As with the Stadium Development Retail/Entertainment Center, further environmental review will be completed for those projects; impacts on visual quality would be assessed in those subsequent documents once preliminary designs are established.

PROJECT EFFECTS

As part of the Bayview Connections Urban Open Space Project, portions of Mendell Avenue and Oakdale Avenue at the Opera House block would be permanently closed to vehicle traffic. It would become new community space as part of an enhanced Opera House Plaza open space area for community functions. Additionally, the proposed Oakdale transit hub, at Third Street and Oakdale Avenue, would have transit shelters and a plaza.

As part of the Bayview Opera House Plaza Project, a significant new public space would be constructed adjacent to the Opera House on Third Street. This pedestrian and streetscape improvement project would create a greater visual cohesion between the Southeast Community Facility and the Third Street Opera House Block. Oakdale and Palou Avenues would have landscape and street improvements, including increased street lighting, street trees and infill planting, street furniture, designated bicycle lanes, and street bulb-outs, which would echo the streetscape improvements along the Third Street corridor.

In addition, a proposed senior housing project would be constructed across the street at McKinnon Street, east of Third Street (see Figure III.E.8). The new buildings would block a portion of the west elevation of the Bayview Opera House from Third Street. The historic north façade, however, would remain visible from Third Street and McKinnon Street. While the proposed senior housing project would be a major new addition to this area in terms of scale and bulk, it would be expected to be generally compatible with adjacent development.

These improvements would not affect mid- or long-range views of Bernal Heights to the west and Silver Terrace to the north. The addition of landscaping and removal of vehicle access would examine the existing conditions. In general, the Bayview Connections Urban Open Space Project would have a beneficial aesthetic impact.

NOTES – *Urban Design and Visual Quality*

¹ City and County of San Francisco, 1998.

² PG&E is in the process of closing Hunters Point Power Plant.

F. SOLAR ACCESS AND SHADING

This section identifies the solar access and shading conditions in the Project Area.

SETTING

Within the Project Area and vicinity, recreation and open spaces under the jurisdiction of the Recreation and Park Department include the following parks: Selby/Palou Mini Park, Palou/Phelps Mini Park, Youngblood Coleman Playground, Ridgetop Plaza, Silver Terrace Playground, Joseph Lee Recreation Center, Hilltop Park, Adam Rogers Park, India Basin Shoreline Park, Hunters Point Recreation Center, Bay View Playground, Gilman Playground, Bay View Park, and Candlestick Park. In addition to these facilities, the Project Area includes other open space areas, which are owned and maintained by other agencies.

REGULATORY FRAMEWORK

San Francisco City Planning Code Section 295, adopted in 1984 pursuant to voter approval of Proposition K, prohibits the issuance of building permits for structures over 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission unless the City Planning Commission, in consultation with the General Manager of the Recreation and Park Department, determines that the shade would not have a significant impact on the use of such property.

IMPACTS

SIGNIFICANCE CRITERIA

San Francisco City Planning Code Section 295, as discussed above, prohibits the issuance of building permits for structures over 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Department unless the City Planning Commission, in consultation with the General Manager of the Recreation and Park Department, determines that the shade would not have a significant impact on the use

of such property. A project found to shade Recreation and Park Department property would be considered a significant adverse impact.

PROGRAM EFFECTS

Impacts Related to the Housing and Economic Development Programs

The Project includes rezoning within the Project Area. In some cases, rezoning could increase the potential height of new development in excess of 40 feet which could potentially shade recreation and open space areas under the jurisdiction of the Recreation and Park Department. This potential shading impact is discussed below.

Within the Northern Gateway Activity Node, the Project would focus on mixed-use projects to increase business and employment activities. New residential development would be encouraged in various locations along Third Street, and properties along Third Street south of Islais Creek would become neighborhood commercial zones. The program proposes bands of light production/distribution/repair (PDR) zoning in this activity node to provide a transition zone between residential and industrial uses. Existing M-1 and M-2 industrial areas would be converted to PDR zoning. Similar changes would occur within the Bayshore Industrial Triangle and India Basin Industrial Park Redevelopment Plan Areas as described above. The PDR zoning allows for development of multi-story buildings, which could potentially exceed 40 feet in height.¹ The maximum allowable height in the neighborhood commercial zones is generally 40 feet, however proposed zoning would allow up to 55 feet.² The Youngblood Coleman Playground and Ridgetop Plaza are located within this activity node and its vicinity. Therefore, buildings above 40 feet could potentially impact the two open space areas.

Neighborhood commercial, residential, and public zones within the Town Center Activity Node would remain in place. However, some of the development controls in the new neighborhood commercial districts will be altered to allow heights up to 55 feet along Third Street. The Joseph Lee Recreation Center is located within this activity node. Thus, buildings above 40 feet could potentially impact this open space area.

The Project would rezone the Health Center Activity Node to neighborhood commercial, mixed use, and PDR. The Bayview Playground is located on 3rd Street between Carroll and Armstrong Avenues and could be shaded if new development in excess of 40 feet high occurs.

The Oakinba Activity Node would be rezoned from M-1 to PDR and a large-scale commercial zoning district would be implemented along Bayshore Boulevard. If new development in excess of 40 feet occurs, resources that could potentially be shaded in this activity node include the Selby/Palou Mini Park.

Similar to the Northern Gateway Activity Node, the M-1 and M-2 districts of the South Basin Activity Node would be converted to PDR, and bands of light PDR areas would be created between existing industrial and residential areas. If new development in excess of 40 feet occurs, resources that could be shaded include Hilltop Park, Adam Rogers Park, and Bay View Playground.

The Hunters Point Shoreline Activity Node would retain its current zoning, with the addition of a special use district to permit mixed uses. The existing recreation resources within this activity node include the India Basin Shoreline Park and Hunters Point Recreation Center. The Recreation and Park Department, in coordination with other City departments and the Trust for Public Land, is currently expanding the shoreline park. The existing resources and this new park could be shaded by development in excess of 40 feet.

The Candlestick Point Activity Node would retain its current zoning of primarily public uses, but the existing small M-1 industrial area would be converted to core PDR zoning. Proposition F amended the *General Plan* zoning map and allows for development of the Stadium Development Retail/Entertainment Center within the activity node to reach a height of 200 feet and 60 feet respectively.³ Any new development under the Project would comply with the requirements of Proposition F. Resources that could be shaded in this activity node include the Candlestick Point Recreation Area.

All new development in the Project Area would be subject to *Planning Code* Section 295 as described above. Because new structures in each of the activity nodes would be subject to requirements of *Planning Code* Section 295, including shadow studies to determine potential

effects on open space and sidewalks, projects implemented under the Project would be evaluated to determine the degree of shadow effects on open space in the Project Area and vicinity. If new structures comply with the *Planning Code* Section 295 upon buildout, less-than-significant shadow impacts would result.

Impacts Related to Other Programs

Development proposed under the other programs of the Project would not place structures in excess of 40 feet such that they could result in adverse shadow effects to new and existing open space areas, and recreation and park facilities. Several of the programs would implement streetscape, landscape and overall neighborhood design improvement plans. Additionally, the Framework Open Space Program would guide the improvement, maintenance, and programming of publicly owned open space resources in the Project Area in concert with the Recreation and Park Department and other local and state agencies.

Development opportunities within the Project Area could place structures in excess of the 40 feet adjacent to or in the vicinity of newly created open space areas under the Framework Open Space Program. However, all new development in the Project Area would be subject to *Planning Code* Section 295 as described above. Because new structures in each of the activity nodes would be subject to requirements of *Planning Code* Section 295, including shadow studies to determine potential effects on open space and sidewalks, future development implemented under the Project would be evaluated to determine the degree of shadow effects on open space in the Project Area and vicinity. If new structures comply with the *Planning Code* Section 295 upon completion, less-than-significant shadow impacts would result.

PROJECT EFFECTS

Similar to the Framework Open Space Program, Phase 1 of the Bayview Connections Urban Open Space Project would add to the Project Area's formal public open space through streetscape improvements and reclaiming public right-of-way for pedestrian-only space. Phase 2 of the project would create opportunities for outdoor performance spaces, community gardens, and public art projects and programmed outdoor cultural events within the Town

Center Activity Node. Consequently, this project would not place structures in excess of 40 feet such that they could result in adverse shadow effects to existing recreation and park facilities.

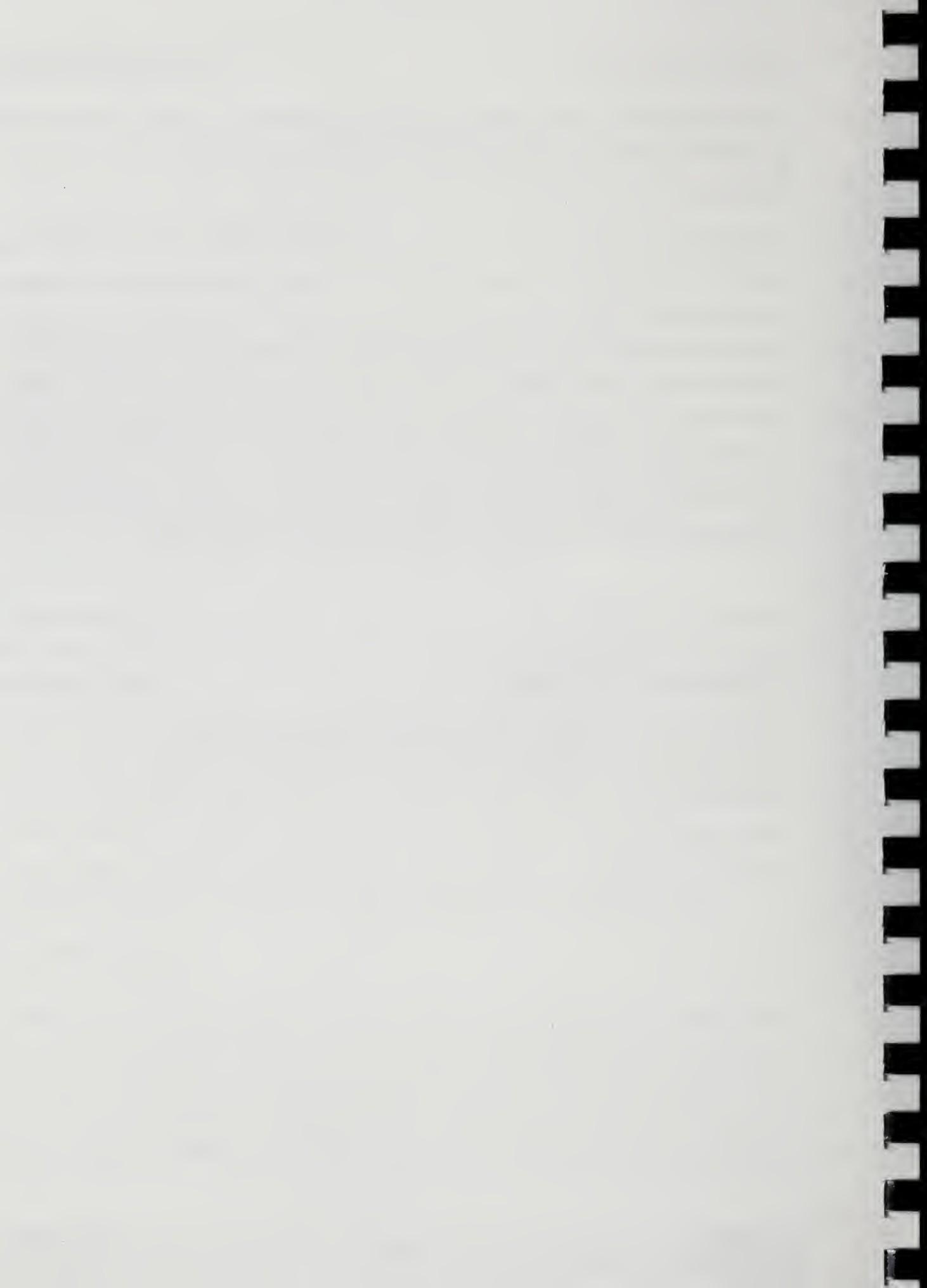
Development opportunities under the Project Area could place structures in excess of 40 feet adjacent to or in the vicinity of newly created open space areas under the Bayview Connections Urban Open Space Project. However, all new development in the Project Area would be subject to *Planning Code* Section 295 as described above. Because new structures in each of the activity nodes would be subject to requirements of *Planning Code* Section 295, including shadow studies to determine potential effects on open space and sidewalks, projects implemented under the Project would be evaluated to determine the degree of shadow effects on open space in the Project Area and vicinity. If new structures exhibit compliance with the *Planning Code* Section 295, less-than-significant shadow impacts would result.

NOTES – Solar Access and Shading

¹ San Francisco Planning Department, Appendix D, PDR Definitions, December 2003.

² City of San Francisco, *San Francisco Municipal Code*, Zoning Maps, 1996, Page 9.

³ With conditional use, the retail/entertainment component could be permitted up to 150 feet.



G. WIND

This section identifies the wind conditions in the Project Area.

SETTING

San Francisco's climate is greatly affected by persistent winds from the Pacific Ocean. During the spring and summer months, lowered atmospheric pressure inland draws marine air across San Francisco. This flow of marine air gives San Francisco its characteristic cool and windy climate. Marine air often brings with it low stratus clouds, particularly in the night and morning hours.

Average wind speeds and prevailing directions in San Francisco are shown in Table III.G-1. These data are from the US Weather Bureau station on United Nations Plaza (at a height of 132 feet), collected from 1945 to 1950. The data provide a basic description of wind conditions in San Francisco, but terrain and buildings can distort winds, causing significant variation in wind to occur across the span of the City. Table III.G-1 shows that average wind speeds are highest during the summer and lowest during the winter. On a daily basis, the highest wind speeds typically occur during mid-afternoon hours, and the lowest occur during early morning hours.

Winds most frequently occur from the west to northwest, reflecting the persistence of sea breezes. Wind direction is most variable in the winter; the approach of winter storms often results in southerly winds. Although not as frequent as westerly winds, these southerly winds are often strong. The strongest winds in San Francisco are typically from the south during the approach of a winter storm.

The Project Area is located at the southeast corner of San Francisco, bordered by the San Francisco Bay on the east. The northern portions of the Project Area receive some shelter from the elevated terrain of Bernal Heights and the more distant Diamond Heights, Twin Peaks, and Mount Sutro. The southern portions of the Project Area are more exposed,

because of their location downwind of the Alemany Gap. A major terrain feature of the southern portion of the Project Area is Bayview Hill. The presence of the Alemany Gap and the location of Bayview Hill are two factors responsible for the notoriously windy reputation of the Candlestick Point area. The Candlestick Park Stadium, with light stands reaching from 140 feet to 240 feet high, also contributes to the formation of a wind tunnel, which often generates 20 mph winds. As a result, the Candlestick Point and South Basin Activity Nodes contain the strongest wind speeds in the Project Area.

TABLE III.G-1
SAN FRANCISCO SEASONAL WIND DIRECTION
FREQUENCY IN PERCENT AND AVERAGE SPEED IN KNOTS

Direction	January		April		July		October		Annual	
	Freq.	Speed	Freq.	Speed	Freq.	Speed	Freq.	Speed	Freq.	Speed
N	12.5	7.9	2.2	11.0	0.3	6.0	3.3	6.6	5.0	7.2
NNE	1.3	5.6	0.7	6.1	0.3	6.8	0.7	6.6	0.8	6.0
NE	4.5	5.3	1.3	4.7	1.1	7.4	2.2	5.8	1.9	5.6
ENE	1.4	6.3	0.6	4.8	0.2	5.1	0.8	5.1	0.8	5.6
E	11.9	4.8	2.6	4.5	0.1	3.9	4.8	4.5	4.8	5.0
ESE	2.1	6.4	0.3	5.2	0.1	2.5	0.6	5.8	0.8	5.8
SE	9.1	6.4	2.4	7.8	0.2	5.0	3.7	6.6	4.2	6.8
SSE	2.85	.6	0.3	3.8	0.1	3.0	1.3	9.0	1.2	6.4
S	6.7	5.0	4.2	7.1	1.1	4.9	4.5	7.5	4.1	6.4
SSW	1.0	4.8	0.4	4.1	0.1	3.0	1.7	12.8	0.9	8.6
SW	4.5	8.0	7.7	9.2	15.6	10.1	7.8	9.1	9.3	9.3
WSW	1.0	5.9	1.7	7.7	1.2	8.1	2.8	8.8	2.4	8.6
W	13.2	7.2	43.0	10.9	53.0	13.1	34.6	9.1	35.7	10.9
WNW	7.5	11.1	20.7	14.1	14.9	14.5	15.2	10.9	13.8	12.7
NW	11.5	7.7	9.3	10.7	10.7	11.4	10.8	8.5	0.0	9.7
NNW	1.2	5.7	0.6	10.8	0.6	8.5	0.5	7.5	.7	8.3
Calm	7.7	---	2.1	---	0.3	---	4.6	---	3.7	---

Source: Donald J. Ballanti, Certified Consulting Meteorologist, 2004.

The remainder of the Project Area has a relatively comfortable climate compared to other areas of San Francisco for the following reasons:

- The Project Area is located on San Francisco's eastern waterfront. Average temperatures generally increase across San Francisco from west to east due to warming of easterly-moving air across the urban landscape;
- The Project Area is partially sheltered from strong, cold winds coming ashore from off the Pacific or through the Golden Gate; and
- The eastern portions of San Francisco are less affected by low clouds and fog than the western portions of San Francisco.

REGULATORY FRAMEWORK

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. Large buildings can redirect wind flows around and down to street level, resulting in increased windspeed and turbulence at street level. In order to provide a comfortable wind environment for people in San Francisco, the City established specific comfort criteria to be used in the evaluation of the proposed buildings in certain areas of the City. The City *Planning Code* specifically outlines these criteria for the Downtown Commercial (C-3) District and each of the Rincon Hill, Van Ness Avenue, and South of Market areas [Sections 148, 249.1(a)(3), 243(c)(8), 263.11(c)]. Development of buildings over 100 feet in height would be allowed for the Stadium Development Retail/Entertainment Center in Candlestick Point Activity Node.

IMPACTS

SIGNIFICANCE CRITERIA

While, there are no specific comfort criteria in the City *Planning Code* that would apply to the Project Area, a project that would cause equivalent wind speeds to nearly reach or exceed 26 miles per hour for a single full hour of the year, thus creating new exceedances (violations) of the hazard criterion established in *Planning Code* Section 148 for other areas within the City, could be considered to have a significant impact.

PROGRAM EFFECTS

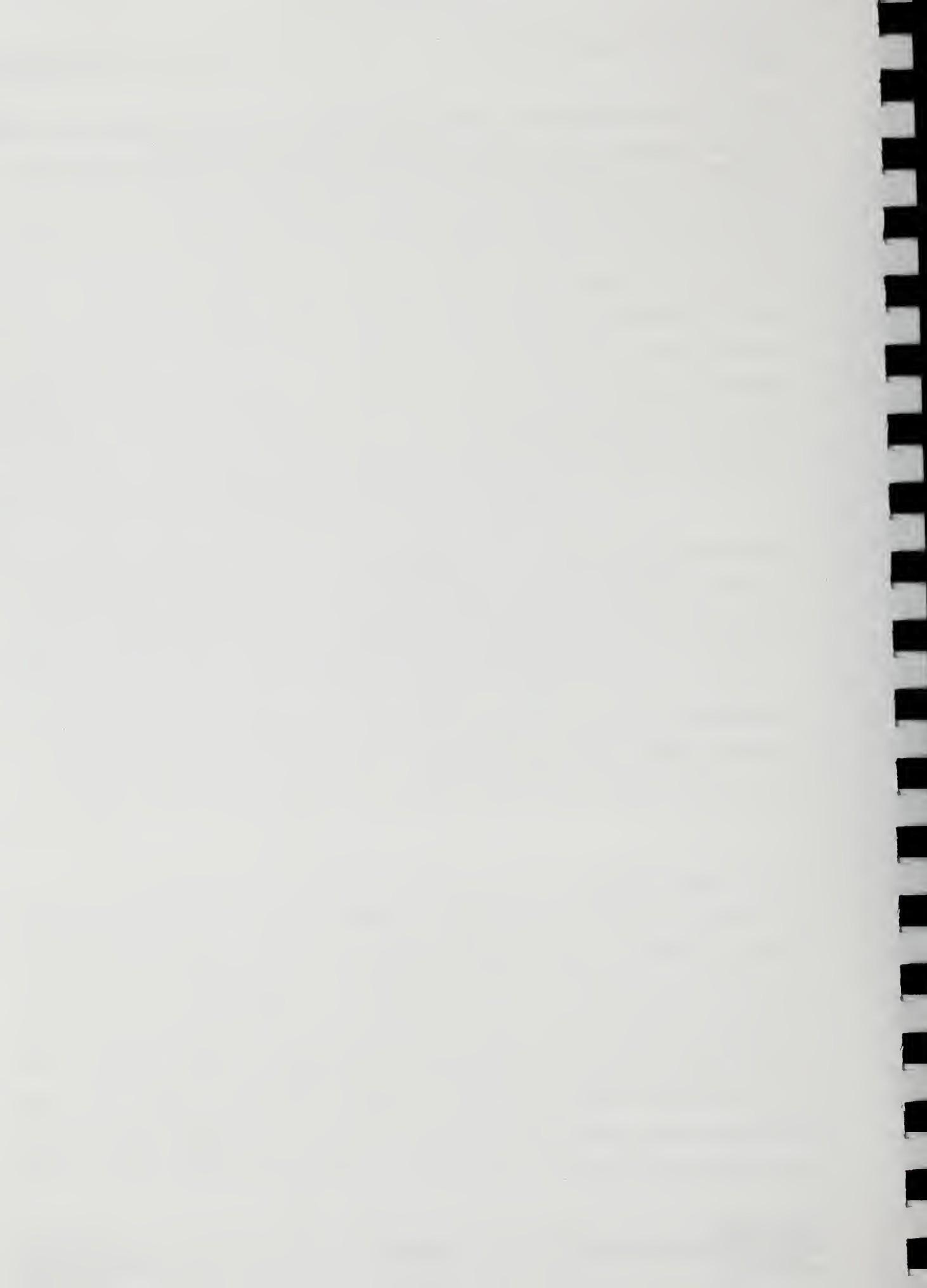
Exposure, massing, and orientation control ground-level wind accelerations near buildings. Exposure is a measure of the extent that the building extends above surrounding structures into the wind stream. A building that is surrounded by taller structures is not likely to cause adverse wind accelerations at ground level, while even a small building can cause wind problems if it is freestanding and exposed. Massing is important in determining wind impact because it controls how much wind is intercepted by the structure and whether building-generated wind accelerations occur above-ground or at ground level. Typically, slab-shaped buildings have the greatest potential for wind problems. Buildings that have an unusual shape or use setbacks have a lesser effect. A general rule is that the more complex the building is geometrically, the lesser the probable wind impact at ground level.

Orientation determines how much wind is intercepted by the structure, a factor that directly determines wind acceleration. Generally, buildings that are oriented with their wide axis across the prevailing wind direction will have a greater impact on ground-level winds than a building oriented with its long axis along the prevailing wind direction.

Prevailing winds in San Francisco are from the west to northwest, with less frequent strong southern winds. The extent and magnitude of wind effects caused by new buildings in the area would depend on each specific structure in relationship to adjacent buildings, streets, and open space areas.

As stated above, buildings over a height of 100 feet could be planned in portions of the Candlestick Point Activity Node, and such new, taller buildings could adversely affect the street-level wind environment. However, design information is not yet available for specific buildings and no further conclusion can be made at this time. Although Section 148 of the *Planning Code* does not apply to the Project Area, wind evaluations would be required for future development for those projects that propose buildings within these specific activity nodes, which would exceed 100 feet in height. These wind evaluation would focus on the potential for hazardous winds and would evaluate the need for building redesign, windbreak features, or further detailed wind-tunnel studies of structures. The building design and review

process for each specific project would require analysis to determine whether there are any hazardous wind effects. Thus, wind impacts would be evaluated on a project-by-project basis.



H. AIR QUALITY

This section includes a summary of the climate in the Project Area; federal, state, and regional air quality standards; and existing air quality conditions in the San Francisco Bay Area for both “criteria air pollutants” and “toxic air contaminants” (TAC). Criteria air pollutants refer to a group of pollutants for which regulatory agencies have adopted federal, state, or regional ambient air quality standards and pollution reduction plans. Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter, and lead.¹ TAC refer to a category of air pollutants that pose a present or potential hazard to human health, but which tend to have more localized impacts than criteria air pollutants. Anticipated emissions of criteria air pollutants and TAC from stationary and mobile sources in the Project Area and from cumulative development are derived, and associated air quality impacts are evaluated.

SETTING

CLIMATE

Regional Climate

The San Francisco Bay Area’s regional meteorological conditions are dominated by the semi-permanent high pressure area in the eastern Pacific Ocean, which is in large part responsible for the cool, dry summers and mild, moderately wet winters. This pressure system is also responsible for the daytime sea breeze that tends to provide fresh air to the Bay Area.

Regional temperature inversions, caused by warm air positioned above the cool daytime surface air, prohibit vertical mixing of air. Regional inversions (thermal boundary layers that prevent upward escape of pollutants) may be caused by the flow of cool marine air moving inland from the Golden Gate or by the rapid cooling of the earth’s surface after sunset. Air pollution potential in the region is highest when inversions are strong and winds are light.

This is because pollutants are emitted into an air mass that has a limited capacity to disperse the contaminants.

Pollution potential is particularly high in the sheltered valleys throughout the region and in the climatological subregions that are not directly affected by the marine air entering through the Golden Gate. In these areas, the regional inversion can last for extended periods of time and, when combined with strong sunlight and locally generated pollutants or pollutants transported into the area, can provide the worst-case conditions for ozone generation and smog formation. The Project Area is in the southeast quadrant of the City, on the bay shore just north of the San Mateo County line. Marine air tends to travel from the west to this area of the Peninsula over the low hills in San Francisco. These winds tend to provide the cool and windy climate and reduce pollution potential in the Project Area by carrying pollutants eastward towards the bay.²

Temperatures in San Francisco are moderated by the marine air and the proximity to the bay. Average summertime highs are in the 60s to mid-70s, and in the winter, average lows are in the 40s.^{3,4}

It is important to note that globally, the climate is changing due to the enhanced greenhouse effect. The greenhouse effect is the warming of the environment due to the trapping of infrared radiation from the sun. This natural effect is enhanced by human activities such as burning of fossil fuels.⁵

Local Wind Patterns

Wind patterns are an important element of climate because they affect air pollution dispersion and transport. High winds tend to cause an increase in dispersion and dilution of emissions. Stable conditions, where wind speed is low and an inversion is present, tend to trap air pollutants near their source of emissions. Therefore, understanding the wind directions and speeds in the Project Area is important to understanding the transport and fate of air pollutants.

In the Project Area, the prevailing winds are generally governed by the marine air moving over the San Francisco hills towards the bay. The local terrain in the Project Area may cause micro-scale eddys or wakes (this is especially notable at Candlestick Park), but the prevailing winds are from the west. These winds tend to carry pollutants generated upwind of the Project Area through the Project Area and toward the bay.

AIR QUALITY CONDITIONS

Regional Air Quality

The California Air Resources Board (CARB), with the assistance of the Bay Area Air Quality Management District (BAAQMD), compiles inventories and projections of six air quality pollutants in the Bay Area: CO, reactive organic gases (ROG), NO₂, SO₂, particulate matter (i.e., PM₁₀ and PM_{2.5}), and lead. Particulate matter is regulated as inhalable particulate matter less than ten microns in diameter (PM₁₀), and fine particulate matter less than 2.5 microns in diameter (PM_{2.5}). Table III.H-1 presents a summary of the emissions inventory and trends of air pollutants for the Bay Area Air Basin and San Francisco County. Substantial reductions in CO emissions from 2003 to 2025 are attributed to the stringent emission controls that have been or will be imposed on motor vehicles and stationary sources. PM₁₀ is forecast to increase, mostly due to the growth in motor vehicle travel in the Bay Area. SO₂ is also forecast to increase throughout the region. The BAAQMD emissions projections assume the following:

- Population, housing, employment, economic growth, and land use will increase as regionally forecasted.⁶
- Cars will become cleaner, as required by California regulations.
- The recently improved “Smog Check” program will continue.
- Controls on industry and business will continue.
- Current transportation control measures will continue.

TABLE III.H-1
BAY AREA CRITERIA POLLUTANT EMISSIONS INVENTORY AND
PROJECTIONS
(ANNUAL AVERAGE TONS PER DAY)

	CO	ROG¹	NOx	SOx	PM₁₀²
<u>BAY AREA AIR BASIN</u>					
2003 Estimated					
Total Emissions	2,438	437	589	71	202
On-road Motor Vehicle Emissions	1,696	172	315	2	9
(Motor Vehicles' Percent of Total)	(70%)	(39%)	(54%)	(2%)	(5%)
2025 Forecasted					
Total Emissions	1,215	294	323	88	216
On-Road Motor Vehicle Emissions	522	62	101	1	11
(Motor Vehicles' Percent of Total)	(43%)	(21%)	(31%)	(1%)	(5%)
<u>SAN FRANCISCO COUNTY</u>					
2003 Estimated					
Total Emissions	227	42	67	4	15
On-road Motor Vehicle Emissions	142	16	34	< 1	1
(Motor Vehicles' Percent of Total)	(63%)	(38%)	(51%)	(<7%)	(7%)
2025 Forecasted					
Total Emissions	123	27	36	6	16
On-road Motor Vehicle Emissions	45	6	11	< 1	< 1
(Motor Vehicles' Percent of Total)	(37%)	(22%)	(31%)	(<2%)	(<6%)

Source: California Air Resources Board, Emissions by Category, available at www.arb.ca.gov/app/emisinv/eib.htm.

Notes:

1. Reactive organic gases (excluding emissions from natural vegetation).
2. On-road motor vehicle emissions do not include paved road dust generated by traffic.

Both the federal Clean Air Act and the California Clean Air Act require that CARB designate portions of the state where federal or state ambient air quality standards are not met as "nonattainment areas". The nine-county San Francisco Bay Area Air Basin has a history of recorded violations of federal and state ambient air quality standards for ozone, CO, and PM₁₀. Since the early 1970s, substantial progress has been made toward controlling these pollutants. The progress has led the area to attaining all state and federal standards except those for ozone and PM₁₀. For ozone, the Bay Area does not meet either the state or federal standard. For PM₁₀, the Bay Area does not meet the state standard; however, the air basin does meet the federal standard. In addition, the air basin meets all standards for CO.

Local Air Quality

The BAAQMD operates air quality monitoring stations in San Francisco at 10 Arkansas Street (at the foot of Potrero Hill) and at 939 Ellis Street (near the Civic Center). These locations are two and four miles to the north and northwest, respectively, of the Project Area. The Arkansas Street location is more representative of conditions in the Project Area because it's closer in proximity, and it is located outside of the downtown business district. The following conclusions can be drawn from the data at the Arkansas Street station.⁷

- During the period of 2001 through 2003, the state 1-hour ozone standard and the federal 1-hour and 8-hour ozone standards were not exceeded.
- During the period of 2001 through 2003, the state 1-hour and 8-hour and the federal 8-hour CO standards were not exceeded on any day.
- During the period of 2001 through 2003, the state 24-hour PM₁₀ standard was exceeded in no more than 5 percent of the samples per year; the federal 24-hour standard was not exceeded at all. The state and federal annual PM₁₀ standards were not exceeded during any year except for six days during 2003 when the state annual PM₁₀ standard was exceeded.

The regional and local air quality shows that the region has made considerable progress to meet the state and federal standards. However, at this time, the region as a whole does not meet ozone standards, and violations of the state and federal standard for ozone continue to persist. In this localized area of San Francisco however, none of the ozone standards have recently been exceeded, and only state standards for PM₁₀ have been recently exceeded. Pollutants from San Francisco, including Bayview Hunters Point, tend to be carried into the more sheltered areas of the region like Contra Costa and Alameda Counties and cause violations of the standards there. In this manner, the region will continue to benefit from further efforts to control emissions in San Francisco.

Toxic Air Contaminants

At locations throughout the Bay Area, the BAAQMD measures ambient levels of approximately 15 of the most commonly occurring TACs. The monitoring station for TACs that is nearest to the project site is the Arkansas Street station. The TACs monitored at this station that are the highest concentrations include benzene, toluene, and meta/para-xylenes.

Each of these compounds is commonly associated with automobile emissions. This data represents the combined impacts of TACs emitted from various sources, including stationary (e.g. industry) and mobile sources.

TACs contribute to the total cancer risk of each individual in the Bay Area. The BAAQMD reports that the cancer risk, due to the average concentrations of TACs measured in the region, has been decreasing in recent years. In 1996, the cancer risk due to TACs measured in the region was estimated to be 212 in one million. In 1998, the cancer risk was estimated to be 199 in one million.⁸ Ambient concentrations of particulate matter from diesel exhaust are not monitored in the Bay Area, but, based on known source activity, CARB estimates that additional calculated cancer risk due to lifetime exposure to ambient concentrations of diesel exhaust is approximately 500 in one million.⁹ No authoritative regulatory body has adopted a standard to determine whether the risks posed by existing levels of TACs should be considered acceptable. The above calculated cancer risk due to ambient concentrations of TACs can be compared against the lifetime probability of being diagnosed with cancer in the United States from all causes, which, according to the National Cancer Institute, is about 40 percent, or 400,000 in one million.¹⁰

Local Source Inventory

Similar to all developed areas, traffic-related emissions occur throughout the Project Area. The sites of greatest concern for traffic-related emissions are centered along the Third Street corridor. Other heavily traveled thoroughfares in the Project Area include US 101, I-280, Bayshore Boulevard, Cesar Chavez Street, Evans Avenue, and the areas around Candlestick Park. Additional transportation-related emissions are generated along the Caltrain railroad tracks. In addition, some of San Francisco's most notable stationary sources of pollutants are located in or near the Project Area. The following is a summary of the different emission sources within each activity node.

Northern Gateway Activity Node (Including IBIP and BIT Areas)

The Northern Gateway Activity Node is comprised mainly of industrial uses. The City's Southeast Water Pollution Control Plant is located within this activity node. Mobile emissions occur along the commercial thoroughfare of Third Street. Stationary emissions consist of light industrial operations such as scrap metal recycling, auto body and repair shops, and asphalt production plants located in this activity node (see III.K, Hazards and Hazardous Materials, and III.L, Geology and Soils, for a discussion of naturally occurring asbestos). Industrial uses in BIT and IBIP also contribute to air emissions. In addition, stationary as well as traffic-related air emissions can be attributed to the IBIP.

Town Center Activity Node

The Town Center Activity Node contains a mixture of commercial and residential land uses. Mobile emissions related to the Third Street commercial corridor and the Caltrain railway are the main sources for emissions within this activity node.

Health Center Activity Node

The Health Center Activity Node is centered on the Third Street commercial corridor. The majority of the mobile emissions related to this area occur along this thoroughfare. In addition, there are a few light industrial businesses including auto body and repair and light manufacturing shops, which represent the main source for stationary emissions within this activity node.

Oakinba Activity Node

The Oakinba Activity Node contains predominantly light to medium industrial land uses and commercial uses on Bayshore Boulevard such as restaurants, fast food businesses, and retail stores. Between the southeast boundary and I-280, there are a few residences. The majority of mobile emissions related to this area occur along Bayshore Boulevard, which is a major arterial road that connects the Project Area with the rest of the City. The industrial land uses in this area range from large food distributors, wholesalers, and car and truck repair shops to

open storage facilities and small graphic art studios. These uses represent the main source for stationary emissions within this activity node.

South Basin Activity Node

The South Basin Activity Node contains predominantly light to medium industrial land uses mixed with single-family residential land use. Residential land use is located in the northeastern and southeast portion of the activity node. The majority of the emission sources are related to the existing stationary sources (i.e. industrial businesses). Traffic-related emissions sources, which include truck traffic within this activity node are centered on the small, southernmost section of the Third Street commercial corridor.

Hunters Point Shoreline Activity Node

The Hunters Point Shoreline Activity Node is a mixture of industrial, commercial, and residential land uses. The Hunters Point Power Plant is a substantial stationary emission source. In addition, the site's soil also contains naturally occurring asbestos. (See III.K, Hazards and Hazardous Materials and III.L, Geology and Soils for a discussion of naturally occurring asbestos).

Candlestick Point Activity Node

The Candlestick Point Activity Node is located in the southernmost portion of the Project Area. Candlestick Park and Candlestick Point State Recreational Area are located within this activity node, as well as a few industrially zoned areas in the northeastern portion of this area. However, mobile source emissions are concentrated only during public events such as San Francisco 49er games at Candlestick Park.

REGULATORY FRAMEWORK

Ambient Air Quality Standards

Federal, state, and local laws and regulations form the foundation for controlling air pollution. The major control efforts tend to focus on six criteria air pollutants and their precursors.

Based on the authority of the federal Clean Air Act, as amended, and the California Clean Air Act, federal and state regulatory agencies set upper limits on the airborne concentrations of the six criteria pollutants: ozone, CO, NO₂, SO₂, particulate matter, and lead.

The federal and state standards for these pollutants are summarized in Table III.H-2. Such ambient air quality standards, or upper limits, are designed to protect all segments of the population including those most susceptible to the pollutants' adverse effects (e.g., the very young, the elderly, people weak from illness or disease, or persons doing heavy work or exercise). The potential human health effects of these air pollutants are presented in Table III.H-3.

Unlike criteria pollutants, there are no regional ambient standards for TAC; this is primarily due to the localized nature of the adverse health impacts caused by TAC emissions. The compounds that qualify as TAC are defined under California law as a category of air pollutants that may cause or contribute to an increase in mortality or serious illness, or that may pose a present or potential hazard to human health.

Stationary sources of TAC are regulated through emission standards and risk reduction strategies implemented at the source of emissions. These include federal and local performance standards for specific emitting activities or industries, and risk reduction strategies practiced at the source. Mobile sources are not directly regulated as sources of TAC, except for lead. Indirect control of TAC, including lead, from mobile sources is generally achieved through fuel efficiency standards and reformulation of fuels.

Air Quality Management Plans

A number of federal and local laws and programs regulate air quality. As discussed previously, the federal Clean Air Act, as amended, and the California Clean Air Act are the primary drivers for attaining and maintaining the ambient air standards. The federal Clean Air Act contains conformity provisions that help to ensure that Specific Plans and projects throughout the region do not produce more emissions than are allowed by local plans. These

TABLE III.H-2
FEDERAL AND STATE AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standard ^a	Federal Standard ^b
Ozone	1-hour	0.09 ppm	0.12 ppm
	8-hour	—	0.08 ppm
Carbon Monoxide	1-hour	20.00 ppm	35.00 ppm
	8-hour	9.00 ppm	9.00 ppm
Nitrogen Dioxide	1-hour	0.25 ppm	—
	annual average	—	0.053 ppm
Sulfur Dioxide	1-hour	0.25 ppm	—
	3-hour	—	0.5 ppm
	24-hour	0.04 ppm	0.14 ppm
	annual average	—	0.03 ppm
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³
	annual geometric mean	20 µg/m ³	—
	annual arithmetic mean	—	50 µg/m ³
Fine Particulate Matter (PM _{2.5})	24-hour	—	65 µg/m ³
	annual arithmetic mean	12 µg/m ³	15 µg/m ³
Lead (Pb)	30-day average calendar quarter	1.5 µg/m ³ —	— 1.5 µg/m ³

Source: California Air Resources Board, July 2003.

Notes:

- ppm = parts per million by volume
 µg/m³ = micrograms per cubic meter
 — = No standard exists for this category

1. California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM₁₀) are values that are not to be exceeded.
2. The form of the federal standards (i.e., how the standard is applied) varies from pollutant to pollutant. For further information, 40 CFR Part 50 includes the relevant form for each federal standard.

TABLE III.H-3
HEALTH EFFECTS SUMMARY OF THE MAJOR CRITERIA AIR POLLUTANTS

Air Pollutant	Adverse Effects
Ozone	Eye irritation. Respiratory function impairment.
Carbon Monoxide (CO)	Impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin. Aggravation of cardiovascular disease. Impairment of central nervous system function. Fatigue, headache, confusion and dizziness. Can be fatal in the case of very high concentrations in enclosed places.
Nitrogen Dioxide (NO ₂)	Risk of acute and chronic respiratory illness.
Sulfur Dioxide (SO ₂)	Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory illness.
Particulate Matter (PM ₁₀)	Increased risk of chronic respiratory illness with long exposure. Altered lung function in children. With SO ₂ , may produce acute illness.
Fine Particulate Matter (PM _{2.5})	May be inhaled and possibly lodge in and/or irritate the lungs.
Lead (Pb)	Prolonged exposure may cause anemia, kidney disease, and in severe cases, neuromuscular disorder and neurologic dysfunction.

Source: Bay Area Air Quality Management District Air Quality Handbook, 1993; Zannetti, Paolo, *Air Pollution Modeling*, 1990.

laws also provide the basis for the implementing agencies to develop mobile and stationary source performance standards.

The BAAQMD is the primary agency responsible for planning, implementing, and enforcing the federal and state ambient standards in the Bay Area. In 1999, the BAAQMD revised the region's State Implementation Plan (SIP). The SIP is a compilation of plans and regulations that govern how the region and State will comply with the federal Clean Air Act requirements to attain and maintain the ozone standard. Along with the BAAQMD, the Metropolitan Transportation Commission (MTC) and the ABAG also contributed to the SIP. The region revised the SIP because of exceedances of the federal and state ozone standards, as well as state PM₁₀ standards. To meet the state ozone standard, the BAAQMD prepared the 2000 Clean Air Plan (adopted December 20, 2000). The BAAQMD's 2000 Clean Air Plan includes specific measures to reduce ground-level ozone by reducing emissions of ozone precursors. As required by the California 2000 Clean Air Act, the Clean Air Plan's measures must be feasible and expeditiously adopted.¹¹

The Bay Area 2001 Ozone Attainment Plan for the national 1-hour ozone standard (adopted October 24, 2001) included two commitments for further planning: (1) to conduct a mid-course review of progress toward attaining the national 1-hour ozone standard by December 2003, and (2) to provide a revised ozone attainment strategy to the U.S. Environmental Protection Agency (EPA) by April 2004.

In April 2004, the EPA made a final finding that the Bay Area has attained the national 1-hour ozone standard. Because of this finding, the previous planning commitments in the 2001 Ozone Attainment Plan are no longer required. The finding of attainment does not mean the Bay Area has been reclassified as an attainment area for the 1-hour standard. The region must submit a redesignation request to EPA in order to be reclassified as an attainment area. Therefore, the portion of the 2004 Ozone Strategy (currently in being prepared by BAAQMD, in cooperation with MTC and ABAG) addressing national ozone planning requirements will include a redesignation request and a maintenance plan to show the region will continue to meet the 1-hour ozone standard.

Currently, there is no state plan required to meet state PM₁₀ and PM_{2.5} standards for the Bay Area region. However, Senate Bill 656, enacted in 2003, requires CARB, in consultation with state air districts, to develop and adopt a list of the most readily available, feasible, and cost-effective control measures that could be employed by CARB and the air districts to reduce PM₁₀ and PM_{2.5} emissions by January 1, 2005. By July 31, 2005, CARB and the air districts must adopt an implementation schedule for the appropriate control measures.

Local environmental plans and policies also recognize community goals for air quality. The *San Francisco General Plan* includes an Air Quality Element.¹² The objectives and policies specified by the City include the following:

Objective 1: Adhere to state and federal air quality standards and regional programs.

Objective 2: Reduce mobile sources of air pollution through implementation of the Transportation Element of the *General Plan*.

Objective 3: Decrease the air quality impacts of development by coordination of land use and transportation decisions.

Objective 4: Improve air quality by increasing public awareness regarding the negative health effects of pollution generated by stationary and mobile sources.

Objective 5: Minimize particulate matter emissions from road and construction sites.

Objective 6: Link the positive effects of energy conservation and waste management to emission reductions.

Requirements for Stationary Sources

Some industrial and commercial facilities are stationary sources that require air quality permits for equipment and/or operations. The BAAQMD is the primary permitting authority throughout the Bay Area. In cases involving federal permit actions, the EPA has oversight authority over BAAQMD. Federal permits are required of facilities that emit large quantities of air pollutants (defined federally as “major stationary sources”). Other sources that do not have the potential to emit more than the major stationary source thresholds may require district-level permits.

Stationary sources are regulated for emissions of TAC through Title III of the federal 1990 Clean Air Act Amendments. Title III sets forth Maximum Achievable Control Technology (MACT) standards to reduce federal “hazardous air pollutants” from specific source categories. The EPA is responsible for developing and enforcing the MACT standards to reduce hazardous air pollutant emissions from specific types of industry source classifications.¹³ This technology-based approach is also designed to control and/or reduce emissions from urban area sources once an affected industry has complied with the MACT standards. Title III, in Section 112(r), also addresses risk management concerning the accidental release of extremely hazardous chemicals.

The state and local approach to regulating TAC emissions from stationary sources is based on the potential risk caused by the emissions of the contaminant. This means that state and local

control of TAC is risk based, whereas the federal approach is technology based. California's Air Toxics "Hot Spots" Information and Assessment Act of 1987 (also referred to as Assembly Bill 2588) requires facilities (defined as any structure associated with emissions or potential emissions of TAC) to quantify their emissions and, if necessary, assess the health risks attributable to these emissions.¹⁴ ("Hot spots" are localized impacts associated with TAC emissions.) This program has resulted in substantial reductions in TAC emissions throughout the state.

IMPACTS

SIGNIFICANCE CRITERIA

A project would have a significant effect on the environment with respect to air quality if it would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, expose sensitive receptors to substantial pollutant concentrations, or permeate the Project Area and vicinity with objectionable odors. To evaluate regional criteria pollutants using a plan-level analysis, in accordance with the *BAAQMD CEQA Guidelines*, plans would have a less-than-significant impact if the following can be demonstrated over the planning period:¹⁵

- Population growth for the jurisdiction will not exceed the values included in the current 2000 Clean Air Plan;
- The rate of increase in vehicle miles traveled for the jurisdiction is equal to or lower than the rate of increase in population; and
- The plan is consistent with the current 2000 Clean Air Plan Transportation Control Measures.

For localized air quality (i.e., CO hot spots related to congested traffic intersections), a plan would have a significant impact if it would cause localized concentrations above the state ambient air quality standards.

BAAQMD CEQA Guidelines address the significance of TAC emissions. For the analysis of a development project, BAAQMD recommends that any project with the potential to expose sensitive receptors (including residences) or the general public to substantial levels of TACs

would be deemed to have a significant impact.^{16,17} Generally, BAAQMD uses the term “project” to refer to a single facility. Proposed development projects that have the potential to expose the public to TACs in excess of the following thresholds would be considered to have a significant air quality impact. These thresholds are, in part, based on California’s Proposition 65 reporting requirements for chemicals known or suspected to cause cancer.

- Probability of contraction cancer exceeds 10 in 1 million for the maximally exposed individual.¹⁸
- Ground-level concentrations of non-carcinogenic TACs would result in a hazard index greater than 1 for the maximally exposed individual.

These criteria refer to incremental risk of the Project.

In contrast to a project-level analysis, for the analysis of a local plan, BAAQMD does not recommend specific risk thresholds as standards of significance. Rather, the significance test is qualitative. BAAQMD recommends that buffer zones be established around existing and proposed land uses that would emit TACs to ensure that the impact is less than significant. BAAQMD includes general plans, redevelopment plans, general plan amendments, and specific area plans in its definition of local plans.

METHODOLOGY

To perform a plan-level analysis, the population estimates for the Project Area were compared to the population assumptions in the 2000 Clean Air Plan (the 2000 Clean Air Plan population assumptions are based on ABAG *Projections 1998*). The population assumptions are based on the San Francisco cumulative growth scenario of 1 percent from 2000 to 2025.

Carbon monoxide concentrations near congested intersections are analyzed using Caltrans’ CALINE4 program and the CO Protocol from the Institute of Transportation Studies. This guidance is used to evaluate “worst-case” air quality conditions at the most heavily impacted intersections.^{19,20} As recommended by the *BAAQMD CEQA Guidelines*, conservative conditions are considered by placing receptors in locations that yield maximum exposure (at the sidewalk corners) and by assuming a stable atmosphere where dispersion of CO in the vicinity of the intersection would be minimal.

PROGRAM EFFECTS

To perform a plan-level analysis, the population estimates were compared to the population assumptions in the 2000 Clean Air Plan. The Project population assumptions are based on the San Francisco cumulative growth scenario of 1 percent from 2000 to 2025 (based on ABAG Projections 2002) while the 2000 Clean Air Plan population growth assumption is 1.1 percent for the region. Therefore, population growth for the region will not exceed the values included in the current 2000 Clean Air Plan.

Future vehicle trips were based on data from the San Francisco Transportation Authority's citywide travel forecasting model. This model assumes increases in vehicle miles traveled are lower in the future than the rate of increase in population for the City of San Francisco because of patterns of public transportation in San Francisco. This is consistent with the current 2000 Clean Air Plan population and growth assumptions for vehicle-miles traveled, and shows consistency of the Project with the *San Francisco General Plan* and the 2000 Clean Air Plan.

In addition, the *San Francisco General Plan* is consistent with the current 2000 Clean Air Plan because it has adopted and implemented the 2000 Clean Air Plan Transportation Control Measures into the *General Plan's* Transportation Element. The Project would be consistent with the *General Plan* policies regarding Transportation Control Measures and would therefore be consistent with the 2000 Clean Air Plan Transportation Control Measures.

Localized Impacts

In addition to the regional contribution to the total pollution burden, traffic due to implementing the Project could result in localized CO hot spots stagnation points such as major intersections and heavily traveled and congested roadways. Project-related traffic could add more cars to area roadways, and could cause existing non-project traffic to travel at slower, less pollution-efficient travel speeds.

The BAAQMD recommends that a micro-scale air quality impact analysis be performed if any of the following three criteria are met:²¹

- Daily project-related CO emissions caused by the project are greater than 550 pounds per day;
- Project traffic impacts an intersection or roadway link operating at a Level of Service (LOS) D, E, or F, or causing the intersection to operate at LOS D, E, or F, during critical periods of minimum atmospheric dispersion; or
- Project-related traffic increases would be 100 vehicles per hour or more on any roadway link, or project-related traffic causes a 10 percent or greater increase in volume on that link.

The CALINE4 model is used to estimate CO concentrations for the seven worst intersections that operate at an LOS D or worse (see Section III.C, Transportation). The locations were studied under the following three traffic scenarios from the transportation analysis:

- Existing – existing traffic, not including project increases;
- Cumulative 2025 – cumulative growth in traffic to the year 2025 without the project; and,
- Cumulative-Plus-Project 2025 – cumulative growth in traffic to the year 2025 with the project.

Table III.H-4 shows that congestion at these intersections would generate maximum roadside concentrations of approximately 5.0 parts per million of CO on a 1-hour basis. These concentrations would not violate federal or state CO standards, and thus would be considered a less-than-significant impact.

Table III.H-5 shows congestion at the same intersections would generate maximum roadside concentrations of approximately 3.5 parts per million of CO on an 8-hour basis.

Construction Impacts

Demolition and construction activities can generate emissions that impact air quality. Of concern are PM₁₀ emissions. The analysis of project construction impacts follows BAAQMD recommendations in focusing effort on the development of effective and comprehensive PM₁₀ control measures rather than the detailed quantification of emissions, primarily because the mitigation measures outlined within the *BAAQMD CEQA Guidelines* would reduce temporary

TABLE III.H-4
SUMMARY OF LOCALIZED CO ANALYSIS (1-HOUR)
AT 25 FEET FROM ROADWAY

Intersection	1-Hour CO Concentrations (ppm)		
	Existing 2001 No Project	Future 2025 No Project*	Future 2025 With Project
Third Street/Cesar Chavez Street	6.7	4.7	4.8
Third Street/Cargo Way	6.2	4.7	4.7
Third Street/Evans Avenue	6.2	4.6	4.7
Bayshore Boulevard/Paul Avenue	6.2	4.6	4.7
Bayshore Boulevard/Silver Avenue	6.6	4.7	4.8
Bayshore Boulevard/Oakdale Avenue	7.6	4.9	4.9
Cesar Chavez Street/Evans Avenue	7.4	4.9	5.0
1-Hour Ambient Air Quality Standard	20.0	20.0	20.0

Source: EIP Associates, 2004.

Notes:

ppm = parts per million. Concentrations are based on CALINE4 outputs which are adjusted with anticipated background CO concentrations of 4.1 ppm (1-hr) and 2.9 ppm (8-hr).

* Substantial reductions in CO emissions from 2003 to 2025 are attributed to the stringent emission controls that have been or will be imposed on motor vehicles and stationary sources.

TABLE III.H-5
SUMMARY OF LOCALIZED CO ANALYSIS (8-HOUR)
AT 25 FEET FROM ROADWAY

Intersection	8-Hour CO Concentrations (ppm)		
	Existing 2001 No Project	Future 2025 No Project	Future 2025 With Project
Third Street/Cesar Chavez Street	4.7	3.3	3.4
Third Street/Cargo Way	4.4	3.3	3.3
Third Street/Evans Avenue	4.4	3.3	3.3
Bayshore Boulevard/Paul Avenue	4.4	3.2	3.3
Bayshore Boulevard/Silver Avenue	4.6	3.3	3.3
Bayshore Boulevard/Oakdale Avenue	5.3	3.4	3.4
Cesar Chavez Street/Evans Avenue	5.1	3.4	3.5
8-Hour Ambient Air Quality Standard	9.0	9.0	9.0

Source: EIP Associates, 2004.

Notes: ppm = parts per million. Concentrations are based on CALINE4 outputs that are adjusted with anticipated background CO concentrations of 4.0 ppm (1-hr) and 2.8 ppm (8-hr).

construction air quality impacts to less-than-significant levels (see **Mitigation Measure 2**, which further requires compliance with BAAQMD mitigation measures).²² The BAAQMD does not consider construction emissions of CO and ozone precursors significant because they have already been included in the BAAQMD's regional planning inventories and are not expected to impede regional attainment or maintenance of air quality standards.

Demolition and excavation activities, construction vehicle travel on unpaved ground, and wind blowing over exposed earth surfaces would generate PM₁₀. Such emissions and the resultant ambient concentrations near construction sites would be sensitive to local meteorology and topography, to variations in soil silt and moisture content, and to the intensity of equipment use. Such emissions could be as high as 51 pounds per acre per day for each construction site.²³ These emissions could lead to violations of federal and state ambient PM₁₀ standards at nearby sensitive receptors. The BAAQMD-approved program of mitigation measures would reduce PM₁₀ emissions. The use of water as a dust suppressant can reduce PM₁₀ emissions by as much as 90 percent when applied properly in a diligent manner. The effectiveness of the control depends on a number of factors including frequency of watering, percentage of silt, and wind speed.

Construction projects under the Project would be required to follow BAAQMD's mitigation measures, which are also identified in this document (see **Mitigation Measure 8**) to further ensure that a less-than-significant project-related impact would result.

Toxic Air Contaminants

Under the Project, TACs would be released from various sources in the Project Area, including stationary sources and mobile sources. Routine emissions of TACs would be generated by several types of stationary sources, including boilers and emergency generators, industrial operations, and commercial/retail operations. Of the various stationary sources, service businesses (e.g., dry cleaners, automobile service stations, and printing shops) would have the greatest potential to emit TACs, based on the types and quantities of hazardous materials they may handle.

Facilities, including TAC generators, are required to obtain permits to operate from the BAAQMD (see **Mitigation Measure 9**). The permits are reviewed by the BAAQMD regarding emissions of TACs and, if appropriate, must go through the risk screening procedure.²⁴ The BAAQMD's Air Toxics "Hot Spots" Information and Assessment Act of 1987 allows BAAQMD to require a facility that has shown its risk to be less than significant to submit an emissions inventory update if there are certain types of changes in operations or surrounding conditions.²⁵ A key change is circumstances that require reevaluation is when a sensitive receptor has been established or constructed with 500 meters (1,640 feet or about one-third of a mile) of the facility. Under BAAQMD's Risk Management Policy, BAAQMD ordinarily would issue permits to a facility with estimated risks below the threshold (one-in-one million cancer risk and acute and chronic non-cancer hazard indices less than 1) or to a facility with a cancer risk between one-in-one million and ten-in-one million, with Toxics Best Available Control Technology. CARB and BAAQMD use the information compiled under the Hot Spots program to identify areas of concern and high-risk stationary sources. Once a high-risk source is identified, an air toxic control measure or source specific rule may be adopted to control the risk.

Notwithstanding the existing mechanisms to protect sensitive receptors, in the absence of specific data on proposed facilities, the Project cannot be shown to provide sufficient buffers for residences or other sensitive receptors to separate them from potential sources of TAC emissions within the Project Area, although mitigation measures have been developed to address this issue with respect to the siting of dry cleaning operations and preschool and child care centers (see **Mitigation Measures 10 and 11**). However, to avoid underestimating the importance of the impact, this EIR concludes that the potential for significant risks to individuals in certain locations within the Project Area cannot be ruled out, and therefore, the impact could be significant. On the other hand, California law and BAAQMD rules provide various mechanisms designed to protect sensitive receptors, including school siting procedures, BAAQMD permit procedures, BAAQMD review of TAC emissions, and provisions of the Hot Spots program, when a sensitive receptor is located with 500 meters (1,640 feet) of a source of TACs. Without the ability to predict future TAC concentrations,

and in the absence of specific standards of significance for risks from TACs, the significance of this potential impact is unknown.

Cumulative Impacts

The San Francisco Bay Area Air Basin is a nonattainment area for ozone and particulate matter (i.e., PM₁₀ and PM_{2.5}). Ozone is created region-wide by atmospheric chemical reactions between ROG and oxides of nitrogen (NO_x), in the presence of ultraviolet sunlight in warm temperatures. Therefore, all regional emissions of ROG and NO_x contribute to cumulative regional increases in ozone levels. The BAAQMD's planning efforts aim to reduce ozone levels while allowing growth to occur, and the *BAAQMD CEQA Guidelines* establish the criteria for identifying significant contributions to cumulative air quality impacts, as noted above under Significance Criteria. As shown above, implementation of the Project would not be expected to have any significant air quality impacts that cannot be addressed with mitigation. The Project would also not conflict with relevant objectives in the Air Quality Element of the *San Francisco General Plan*. With regard to TACs, California law and BAAQMD rules provide various mechanisms designed to protect sensitive receptors, including school siting procedures, BAAQMD permit procedures, BAAQMD review of TAC emissions, and provisions of the Hot Spots program, when a sensitive receptor is located within 500 meters (1,640 feet) of a source of TACs. However, without the ability to predict future TAC concentrations, this impact could be considered cumulatively significant.

Implementation of regional and statewide control measures to reduce particulate matter emission levels authorized by enactment of Senate Bill 656 (see earlier discussion under Air Quality Management Plans) would allow growth to occur within the Project Area. Similar to ozone emissions, implementation of the Project would not be expected to have any significant air quality impacts and would also not conflict with the Air Quality Element of the *San Francisco General Plan*. Based on this information, the Project would not be expected to contribute significantly to cumulative air quality impacts.

NOTES — *Air Quality*

- ¹ National ambient air quality standards have been established for criteria pollutants, named for the “criteria” documents that justified their regulation.
- ² BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April, 1996, revised 1999. Appendix D.
- ³ The NOAA-CIRES (National Oceanic and Atmospheric Administration - Cooperative Institute for Research in Environmental Studies) Climate Diagnostics Center. San Francisco Airport observations compiled between 1961-1990.
- ⁴ BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, Appendix D, April, 1996, revised 1999, pp. D-14, D-15.
- ⁵ Intergovernmental Panel on Climate Change, *Climate Change 1995 - The Science of Climate*. Report of the IPCC Working Group I, 1995.
- ⁶ BAAQMD, 2000 Clean Air Plan, and Triennial Assessment, adopted by the Board of Directors, December 20, 2000.
- ⁷ California Air Resources Board, Ozone Data Summary (2001-2003) and PM₁₀ Air Quality Data Summaries (2001-2003), available at www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w.
- ⁸ BAAQMD, *Toxic Air Contaminant Control Program, Annual Report 1998*, December 1999.
- ⁹ BAAQMD, *Toxic Air Contaminant Control Program, Annual Report 1998*, December 1999.
- ¹⁰ National Cancer Institute, *Surveillance, Epidemiology and End Results (SEER) Cancer Statistics Review 1973-1997*, <http://seer.cancer.gov>, accessed October 2000.
- ¹¹ BAAQMD, 2000 Clean Air Plan, and Triennial Assessment, adopted by the Board of Directors, December 20, 2000.
- ¹² San Francisco Planning Department, *Air Quality - an Element of the General Plan of the City and County of San Francisco*, July 1997.
- ¹³ United States Code, Title 42, Section 7412(d). Also known as Section 112(d) of the 1990 federal Clean Air Act Amendments.
- ¹⁴ California Health and Safety Code, Sections 44340, 44341, and 44360, 1997.
- ¹⁵ BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, revised December 1999.
- ¹⁶ BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, revised December 1999, p. 17.
- ¹⁷ *BAAQMD CEQA Guidelines*, 1996, revised 1999, p. 17. This applies to receptors (e.g., residences, schools) locating near existing sources of TACs, as well as sources of TACs location near existing receptors.
- ¹⁸ The maximally exposed individual (MEI) is the hypothetical person whose exposure to TACs from a project results in the greater risk. For residential receptors, the MEI is assumed to live near the source all his or her life (assumed to be 30 years [based on EPA Risk Assessment Guidelines] or 70 years [based on Air Toxic “Hot Spots” Risk Assessment Guidelines]).

III. Environmental Setting and Impacts
H. Air Quality

- ¹⁹ California Department of Transportation, Division of New Technology and Research, CALINE4 - A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways, June 1989.
- ²⁰ Institute of Transportation Studies, University of California, Davis, *Transportation Project-Level Carbon Monoxide Protocol*, Revised December 1997.
- ²¹ BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, Revised December 1999.
- ²² BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, Revised December 1999.
- ²³ EIP Associates, *Mission Bay Subsequent Final Environmental Impact Report*, September 1998, Section F, Air Quality Impacts.
- ²⁴ BAAQMD, Regulation 2, Rule 1-316, New or Modified Sources of Toxic Air Contaminants, June 1995.
- ²⁵ California Health and Safety Code, Section 44344.7(a)(2), 1997.



I. NOISE

This section describes existing conditions and potential project impacts with regard to noise in and around the Project Area. The Setting subsection presents a discussion of noise and how it is measured, the applicable regulatory framework for noise in the context of the Project, the noise-sensitive locations throughout the Project Area, and the existing noise conditions in the Project Area.

SETTING

This subsection describes the meaning of noise, its measurement, existing sources of noise, sensitive receptors in the Project Area, and applicable regulations for noise control.

NOISE FUNDAMENTALS

Sound is caused by pressure vibrations in air. The sound level is the intensity of the pressure vibrations, and it is most often measured in terms of decibels (dB).¹ Each 3-dB increase or decrease in sound level represents approximately two-times or one-half, respectively, of the sound intensity. Although the decibel scale describes the pure physical intensity of sound, it cannot accurately describe loudness as perceived by the human ear. The pitch or frequency of a sound must be taken into account when measuring human response to sound. For this reason, a frequency-dependent weighting system is employed whenever noise is measured for the human perspective. For this analysis, noise measurements are given in A-weighted decibels (dBA). Generally, a difference of 3 dB is noticeable to most people and a difference of 10 dB is perceived as a doubling of loudness. Table III.I-1 shows typical sound levels for common environments.

TABLE III.I-1
TYPICAL SOUND LEVELS
MEASURED IN THE ENVIRONMENT AND INDUSTRY

Noise Source (Distance)	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
	130		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50')	100		Very Loud
Ambulance Siren (100')			
	90	Boiler Room	
Freight Cars (50')	80	In Kitchen With Garbage Disposal Running	
Freeway (100')			
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center	
Department Store			
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')			
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

Source: EIP Associates

Because environmental noise fluctuates over time, several statistical indicators have been developed to describe environmental noise. Two of the most commonly used indicators are L_{eq} and L_{dn} .^{2,3} The equivalent energy indicator, L_{eq} , is an average of noise over a stated time period, usually one hour; the day-night average, L_{dn} , is a 24-hour average which accounts for

the greater sensitivity of most people to nighttime noise. Community noise equivalent level (CNEL) is also a 24-hour average, like L_{dn} , but is further weighted for sensitivity to evening noise.⁴ These and other indicators are used to describe noise from different sources in different environments. For example, L_{dn} and CNEL are often used to describe general community noise levels, as they provide average noise levels over the entire 24-hour day. In the analysis for the Project, L_{dn} is used to discuss traffic noise during the 24-hour day at residential uses. The L_{eq} over a one-hour period (hourly L_{eq}) is usually used to describe environmental noise near nonresidential sensitive receptors like parks, churches, and hospitals because most people would not remain in these locations for more than a few hours.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors such as the weather and reflecting or shielding also help intensify or reduce the noise level at any given location. While noise travels up (i.e., up a hillside) it would attenuate slightly faster than noise traveling in a horizontal plane. A commonly used rule of thumb is that for every doubling of distance from the source, the noise level is reduced by about 6 dB.⁵ Noise levels are reduced by intervening structures. Generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dB.⁶

EXISTING NOISE CONDITIONS

The major noise source in San Francisco is transportation noise. Traffic on the major thoroughfares throughout the Project Area and aircraft overflights create a background noise environment that is generally uniform throughout the area. Commuter rail and freight along the Caltrain railroad tracks and traffic for Candlestick Park events also contribute to the background noise in the area.

The Environmental Protection Element of the *San Francisco General Plan* illustrates background noise levels and thoroughfare noise levels for all areas of the City. The element shows that the general background noise (L_{dn}) of Bayview Hunters Point is between 60 and 65 dBA. Thoroughfare noise (L_{dn}) is shown as high as 80 dBA along US 101 and I-280, and as high as 75 dBA along the Third Street corridor.⁷

Existing noise exposure along the Third Street corridor is also summarized in the FEIS/FEIR for the Third Street LRT project.⁸ The noise analysis of that report includes monitoring results for locations in Bayview Hunters Point along the Third Street corridor. The noise measurements in that analysis are based on either 24-hour monitored results or short-term (30-minute) monitoring results extrapolated to 24-hour averages. The generalized existing noise conditions along various segments of the Third Street corridor in the Project Area are summarized in Table III.I-2.

TABLE III.I-2
GENERALIZED EXISTING NOISE CONDITIONS (DBA)

Segment of Third Street	Generalized Existing L_{dn}	
	First Row¹	Second Row²
Evans Avenue to Jerrold Avenue	76	66
Jerrold Avenue to Palou Avenue	76	66
Palou Avenue to Thomas Avenue	73	63
Thomas Avenue to Armstrong Avenue	73	63
Armstrong Avenue to Jamestown Avenue	77	67
Jamestown Avenue to US 101 overpass	70	70

Source: Federal Transit Administration - U.S. DOT, City and County of San Francisco, Planning Department, *Third Street Light Rail Project FEIS/FEIR Volume I, Table 4-21. Generalized Existing Noise Conditions, Initial Operating Segment*, November 1998. SCH No. 96102097, SF Case File No. 96.281E.

Notes:

- Buildings along the roadway that are directly exposed to the traffic noise.
- Buildings that are at least one row back from the street and are acoustically shielded from the major source of traffic noise by intervening buildings.

Other Potential Noise Sources in the Project Area

The background noise environment in the Project Area includes a large population of industry and manufacturing sources. Bayview Hunters Point is home to the Southeast Water Pollution Control Plant and the Hunters Point Power Plant. Other industry in the area also contributes to the background noise levels. The Northern Gateway Activity Node, BIT, and IBIP contain industrial uses such as scrap metal recycling, auto body and repair shops, and light and heavy manufacturing, warehousing, and processing activities. IBIP also contains the main U.S.

Postal Service distribution facility in San Francisco. All of these uses are potential noise sources during their facility operations. The Town Center, Health Center, Oakinba, South Basin, and Hunters Point Shoreline Activity Nodes are a mixture of industrial, commercial, and residential land uses with similar noise sources as the Northern Gateway Activity Node mixed together with residential uses. The Candlestick Point Activity Node is predominately public uses with a few industrially zoned uses in the northeastern portion of the activity node. Public events such as San Francisco 49er games and concerts at Candlestick Park result in periodic noise disturbances from music, crowd noise, and vehicle traffic during such events.

NOISE SENSITIVE USES

Certain types of land uses are considered more sensitive than others to higher noise levels. Residential and open-space land uses are generally considered noise sensitive because noise can disrupt sleep, conversation, reading, and similar activities that can occur at any time. Schools, religious institutions, libraries, hospitals, and nursing homes are also generally more sensitive to noise than commercial, office, and industrial uses.

Sensitive Uses in the Project Area

Throughout the Project Area there is a mix of industrial, commercial, and residential uses. Often these uses are within the same city block or located within one block of one another. Noise-sensitive uses in the Project Area include residential uses, community facilities, schools, hospitals, and parks/playgrounds.

Residential uses are scattered throughout the Project Area, primarily on the blocks behind the neighborhood commercial uses fronting Third Street. Other noise sensitive uses in the Project Area include the Bayview Opera House and surrounding community facilities near Third Street and Oakdale Avenue, and the Southeast Community Center on the corner of Oakdale Avenue and Phelps Street in the Town Center Activity Node. The numerous playgrounds throughout the Project Area such as the Bayview Playground on Third Street between Armstrong and Carroll Avenues and the Southeast Health Center in the Health Center Activity

Node are also sensitive noise receptors within the Project Area. Other sensitive receptors include schools, libraries, and religious institutions.

REGULATORY FRAMEWORK

The Noise Control Act of 1972 assigns the U.S. Environmental Protection Agency (EPA) the responsibility of developing regulations to adequately control environmental noise such that it does not endanger the population's health and welfare. The EPA established the Office of Noise Abatement and Control, but in 1981, funding for the office was removed. Similarly, the California Department of Health Services once operated an Office of Noise Control that has since been disbanded. As a result, environmental noise protection has become a local responsibility.⁹

State Guidelines

Three categories of noise exposure severity in the outdoor environment were established by the Office of Noise Control at the California Department of Health Services (DHS):

- Normally Acceptable (i.e., for residential, hotels, and hospitals, an L_{dn} of 60 dBA or less) – no undue burden on affected receptors, needing no mitigation;
- Conditionally Acceptable (i.e., for residential, hotels and hospitals, an L_{dn} between 60 dBA and 75 dBA) – requires some mitigation of exposure, as established by an acoustic study; and
- Unacceptable (i.e., for residential, hotels and hospitals, an L_{dn} greater than 75 dBA) – mitigation not feasible.

Most communities, including San Francisco, have updated the original DHS ranges with a local noise ordinance that suits their local requirements.

State Building Code

Title 24 of the California Code of Regulations (CCR) establishes standards governing indoor noise levels that apply to all new (post-1974) multi-family residential units (i.e., hotels, motels, apartments, condominiums, and other attached dwellings) in California. The design of the residential structures is subject to an acoustical analysis when located in an area where

exterior L_{dn} exceeds 60 dBA. The design must be capable of attenuating exterior noise to a maximum L_{dn} noise level of 45 dBA in any habitable room. This code is enforced by the San Francisco Department of Building Inspection during the building design phase.¹⁰

San Francisco Noise Ordinance

The San Francisco Noise Ordinance regulates both construction noise and fixed-source noise. Sections 2907 and 2908 of the *San Francisco Police Code* regulate construction noise and provide that:

- Construction noise is limited to 80 dBA at 100 feet (ft.) from the equipment during daytime hours (7 a.m. to 8 p.m.). Impact tools are exempt provided that they are equipped with intake and exhaust mufflers.
- Nighttime construction (8 p.m. to 7 a.m.) that would increase ambient noise levels by 5 dBA or more is prohibited unless a permit is granted by the Director of Public Works.

Section 2909 regulates fixed-source noise such as mechanical noise from buildings, measured at the property line of the affected property, establishing maximum noise limits. The noise limits are established for zoning districts in which the affected property is located. In residential areas, generally noise levels are limited to 55 to 60 dBA during the day and 50 to 55 dBA during the night. In commercial areas, acceptable noise levels are 60 dBA at night and 70 dBA during the day. In industrial areas, including proposed production, distribution and repair (PDR) areas, 70 to 75 dBA is the established acceptable noise level any time.

A general provision in the Noise Ordinance permits the City to regulate unnecessary, excessive, or offensive noise that is annoying to most people. This provision, summarized below from Sections 2915 and 2901.11, generally prohibits excessive noise from a stationary source:

- Unnecessary, excessive or offensive noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance of any reasonable person of normal sensitivity residing or working in the area is prohibited. A noise level, which exceeds the ambient noise level by 5 dBA or more, as measured at an affected receptor's property line, is deemed a *prima facie* violation of the Ordinance.

However, Police Code Section 2915 allows the Chief of Police to consider other factors in determining whether a violation of the Police Code exists. A summary of the noise limits established in the San Francisco Noise Ordinance is provided in Table III.I-3.

TABLE III.I-3
SUMMARY OF NOISE LIMITS IN THE SAN FRANCISCO NOISE ORDINANCE

Noise Source	Applicable Zoning District	Time Period	Noise Limits
Construction Equipment and Activities	All zoning districts	7 a.m.-8 p.m.	80 dBA at 100 feet; limit does not apply to impact tools/equipment
	All zoning districts	8 p.m.-7 a.m.	5 dBA above ambient at property line without special permit
Solid Waste Collection Equipment	All zoning districts	Anytime	75 dBA at 50 feet
Off-highway Vehicle Use	Public zones	Anytime	
Off-highway Vehicles			70 dBA at 50 feet
Heavy Duty Vehicles			82 dBA at 50 feet
Motorcycles			77 dBA at 50 feet
Other Highway Vehicles			74 dBA at 50 feet
Fixed Noise Sources	Low- and medium-density residential zones	7 a.m.-10 p.m.	55 dBA at property line
		10 p.m.-7 a.m.	50 dBA at property line
	High-density residential, neighborhood commercial, and residential commercial	7 a.m.-10 p.m.	60 dBA at property line
		10 p.m.-7 a.m.	50 dBA at property line
	Commercial zones	7 a.m.-10 p.m.	70 dBA at property line
		10 p.m.-7 a.m.	60 dBA at property line
	Light industrial zones	Anytime	70 dBA at property line
Heavy industrial zone	Anytime		75 dBA at property line

Source: *San Francisco Municipal Code, Police Code, Article 29, Regulation of Noise.*

San Francisco General Plan – Environmental Protection Element

The *San Francisco General Plan* outlines the policies, programs, and guidelines the City will follow to control noise. The Environmental Protection Element includes a section on Transportation Noise, as cars, trucks, and buses are the major source of noise in San Francisco's dense urban setting. The Transportation Noise section contains objectives to reduce transportation noise and to promote land uses that are compatible with the existing noise environment and suggests exterior noise levels for various land uses. The maximum exterior L_{dn} considered "satisfactory, with no special noise insulation requirements" is 60 dBA for residential and transient lodging land uses, 65 dBA for schools and churches, and 70 dBA for office buildings. In areas where the 24-hour average noise levels exceed these values, the Environmental Protection Element suggests that a detailed analysis of noise reduction requirements be made and that noise insulation features be included in the design of new development. New residential uses are discouraged in areas with exterior L_{dn} values above 65 dBA unless noise insulation is included. The building code requirements in Title 24 of the CCR would define the extent of insulation necessary.

The Environmental Protection Element objectives that are potentially relevant to the proposed development include the following:

Objective 9: Reduce transportation-related noise.

Objective 10: Minimize the impact of noise on affected areas.

Objective 11: Promote land uses that are compatible with various transportation noise levels.

IMPACTS

SIGNIFICANCE CRITERIA

The San Francisco Noise Ordinance and the Environmental Protection Element Transportation Noise section of the *San Francisco General Plan* provide guidance in evaluating noise effects from the Project and provide specific legislated criteria for acceptable noise levels; however,

the criteria are not adopted CEQA significance thresholds. Noise effects would be significant if the project would:

- Substantially increase the ambient noise levels for adjoining areas (i.e., a 5-dBA increase);
- Violate CCR Title 24 Noise Insulation Standards, if applicable;
- Be substantially impacted by existing noise levels.

METHODOLOGY

Noise impacts from the Project would result from construction activities, increases in traffic on local streets, stationary source operations, and intermittent and emergency activities. Quantitative and qualitative analyses were performed for noise sources. For traffic noise, the analysis was performed using computer modeling. A qualitative approach was used for construction noise, stationary source noise, and intermittent noise.

All noise levels presented are ambient levels for locations on the exterior of the receptor sites. Interior noise levels would be reduced an average of 15 dB with windows open and 25 dB with windows closed.¹¹ This is the expected amount of reduction in decibels afforded by building walls and windows. For example, if the exterior noise level is 70 dBA, the interior noise level with windows open is 55 dBA. The relative increases in interior noise levels would be the same as the relative increases in exterior noise levels presented in this section. For example, if project-related traffic causes a 3 dBA change in exterior noise levels, a 3 dBA change would be experienced indoors as well.

Traffic Noise

Noise from the motor vehicle traffic in the Project Area was modeled using Caltrans' SOUND32 computer model, an adaptation of the Federal Highway Administration's Highway Traffic Noise Prediction Model (FHWA-RD-77-108). Noise monitoring data and traffic counts along one or two adjacent roadway segments, performed simultaneously, were used to calibrate the model.

Traffic noise levels were modeled at five intersections where traffic was projected to increase the most as a result of the Project. The locations were studied under the following three traffic scenarios from the transportation analysis:

- Existing – existing traffic, not including project increases;
- Cumulative 2025 – cumulative growth in traffic to the year 2025 without the project; and,
- Cumulative-Plus-Project 2025 – cumulative growth in traffic to the year 2025 with the project.

The L_{dn} was used to evaluate traffic noise impacts for current residential study locations and study intersections because these uses often are, or may be in the future, occupied during an entire 24-hour period, and are sensitive at night (when the L_{dn} adds a 10 dBA penalty to ambient noise).

PROGRAM EFFECTS

As described in Section II, Project Description, p. II-6, the Project includes plans, programs, and activities designed to stimulate land development and other improvements. The Project also includes changes in zoning as well as specific improvements collectively known as the Bayview Connections Urban Open Space project. The Project would focus public investment within seven community-identified economic development activity nodes, as well as the IBIP and BIT redevelopment areas. Based on changes in zoning proposed in the activity nodes, the expected availability of development sites, and the implementation of Project activities over time, the total net new floor area anticipated within the Project Area would be approximately 2.4 million square feet by 2025. The Project would convert about 549 acres of land now zoned industrial to PDR. The PDR rezoning would centralize and intensify industrial uses into distinct areas of Bayview Hunters Point while creating a buffer or transition zone by placing light PDR uses adjacent to residential uses. In addition, residential uses mixed with commercial and PDR uses would be focused around the Third Street corridor. The following analysis describes how the Project would affect the overall noise environment of the Project Area.

Construction Noise Impacts

Construction-related noise impacts resulting from implementation of the Project would have a short-term effect at individual project locations. For each location, on-site demolition, excavation, and construction would require use of heavy equipment, including trucks, graders, loaders, excavators, and cranes. Pile driving could be necessary to install foundation supports for specific projects due to project implementation. Typical noise source levels for a wide variety of construction equipment have been summarized by the EPA in Table III.I-4. In all cases, construction noise would fluctuate depending upon the construction phase, equipment type and duration, and the location of on-site operations in relation to existing structures.

In addition to noise from the construction sites, construction activities would cause increased traffic noise along access routes to the development sites. Heavy trucks would bring excavated materials, equipment, and building materials to and from each site. It is anticipated that the major pieces of equipment would be moved onto the site once during each construction phase and would cause an insignificant short-term effect on ambient noise levels.

Construction activities in the Project Area would be conducted in compliance with the *San Francisco Noise Ordinance*, as discussed in the Regulatory Framework, above, which would reduce any impacts to a less-than-significant level.

Stationary Source Noise Impacts

New development resulting from implementing the Project may introduce a variety of stationary sources of noise, including electrical and mechanical air conditioning equipment, most of which would be located on rooftops. Although noise levels from equipment sources may be annoying in a quiet environment, existing ambient noise conditions within the Project Area would generally mask on-site equipment noise. Noise levels from operation of equipment would result in an increase of ambient noise levels that would be less than significant.

TABLE III.I-4
CONSTRUCTION EQUIPMENT NOISE LEVELS
BEFORE AND AFTER MITIGATION

Equipment Type	Noise Level at 50 Feet	
	Without Noise Control (dBA)	With Feasible Noise Control (dBA) ¹
Earthmoving		
Front Loaders	79	75
Backhoes	85	75
Dozers	80	75
Tractors	80	75
Scrapers	88	80
Graders	85	75
Trucks	91	75
Pavers	89	80
Materials Handling		
Concrete Mixers	85	75
Concrete Pumps	82	75
Cranes	83	75
Derricks	88	75
Stationary		
Pumps	76	75
Generators	78	75
Compressors	81	75
Impact		
Pile Drivers	101	95
Jack Hammers	88	75
Rock Drills	98	80
Pneumatic Tools	86	80
Other		
Saws	78	75
Vibrators	76	75

Source: Bolt, Beranek, and Newman for the U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 31, 1971.

Note:

1. With feasible noise controls, these levels are obtainable by selecting quieter procedures or machines, requiring no major redesign or extreme cost.

Traffic Noise Impacts

In addition to air quality effects, traffic due to implementing the Project could result in noise impacts at major intersections. Project-related traffic could add more cars to area roadways, and could increase the noise associated with cause existing non-project traffic to travel at slower, less pollution-efficient travel speeds. Table III.I-5 presents noise levels at five locations associated with traffic increases in the Project Area. Weekday PM peak-hour traffic conditions were estimated for existing conditions, future conditions without the Project, and future cumulative conditions for year 2025. Development resulting from the Project would create a less-than-significant increase in noise levels in the Project Area, because the noise levels would not increase above 2.8 dBA. Nuisance noise is generally limited by the San Francisco Noise Ordinance to increases of 5 dBA above ambient conditions.

TABLE III.I-5
PROJECTED AND CUMULATIVE NOISE LEVELS FOR
EXISTING, 2025 NO PROJECT, AND 2025-WITH-PROJECT TRAFFIC VOLUMES

Location	L _{dn} at 50 feet (dBA)				
	Existing	2025 No Project	Projected Increase	2025 + Plan	Projected Increase
Third Street near Cesar Chavez Street	66.6	68.4	1.8	68.6	2.0
Third Street near Evans Avenue	64.8	66.7	1.9	66.7	1.9
Bayshore Boulevard near Paul Avenue	64.7	66.5	1.8	67.5	2.8
Bayshore Boulevard/Silver Avenue	65.5	67.5	2.0	67.7	2.2
Bayshore Boulevard/Oakdale Avenue	67.2	68.6	1.4	68.6	1.4

Source: EIP Associates, 2004.

The Enhanced Framework Truck Route Program would designate truck routes to divert traffic away from residential areas and would physically improve truck routes with landscaping appropriate for truck “parkways.” Streetscape amenities, such as increased lighting, wider sidewalks, and bicycle lanes would create streets that are intended to be safer and more accessible to pedestrians. Although the specific routes are not finalized, it is assumed the new

truck routes would have an overall beneficial effect on the noise environment in the Project Area by focusing truck traffic on specific routes.

Existing Sensitive Receptors

Although ,the Project Area comprises a mix of commercial, industrial, public/institutional and residential uses, residential use is the primary sensitive land use in the Project Area. Generally, the non-office upper floors of buildings are residential.

Existing traffic noise levels at most of the study locations near residential uses are high enough (above 65 dBA on the exterior of the building) for the *San Francisco General Plan* Environmental Protection Element to discourage new residential developments unless substantial noise reduction features are included. Newer residential buildings are required to meet interior noise standards in CCR Title 24 and, therefore, would include adequate noise insulation.

The future ambient exterior noise levels with Project-related traffic noise would range from about 65 dBA to 75 dBA L_{dN}. The interior noise levels would be about 15 dBA less than exterior levels with windows open and 25 dBA less with windows closed. The exterior noise levels could be annoying to some residents along relatively noisy streets like Third Street, Bayshore Boulevard, or Cesar Chavez Street; the level of annoyance would depend on a number of factors, including whether or not the buildings in the affected residential areas contain sufficient noise insulation. The Project would mainly rezone existing industrial land uses to new PDR zoning designations that would create distinct industrial areas and residential uses mixed with commercial and PDR uses along the Third Street corridor. These land uses would not differ with existing land uses with respect to ambient noises. Stationary noise sources from industrial activities would be located near sensitive receptors. The rezoning would, however, create a buffer or transition zone between those industrial uses and residents by placing light PDR zones between heavy PDR zones and residential and other sensitive receptors. While exterior noise levels may increase and result in associated interior noise level increases, these increases would not be of the magnitude to substantially alter the exterior noise environment and would cause a less-than-significant impact.

Future Sensitive Receptors

New multi-family housing developments in the Project Area would be required by CCR Title 24 to provide an interior environment with noise levels below 45 dBA (L_{dn}). Therefore, noise increases at the potential housing locations would not be a significant impact. Entertainment and sport activities, such as concerts and 49er football games, could result in noise disturbance from music, crowds or vehicles during event periods. While those noise conditions may disturb residents occupying new buildings in the vicinity, noise effects would be limited by the noise insulation requirements for new residential construction, project review requirements for entertainment uses in the Project Area, and enforcement of the San Francisco Noise Ordinance. These noise conditions would be considered a less-than-significant impact.

Cumulative Traffic Noise

The ambient noise levels at all locations in the Project Area would increase as a result of traffic generated by cumulative development. Table III.I-5 summarizes the modeled noise levels from existing, cumulative, and cumulative-plus-project traffic at the five most impacted roadway locations according to the Transportation analysis (see Section III.D Transportation). The cumulative traffic analysis includes PM peak-hour traffic increases associated with implementation of the Project and other cumulative growth within San Francisco. The PM peak-hour traffic values were scaled to arrive at a total 24-hour (L_{dn}) traffic increase.

With cumulative growth in traffic (including the Project) in 2025, 24-hour traffic noise levels would increase. The intersection of Bayshore Boulevard and Paul Avenue would experience an increase of 2.8 dBA in the future-plus-project analysis. As stated previously, according to the San Francisco Noise Ordinance, nuisance noise is generally limited to within 5 dBA of ambient conditions. Therefore, noise from cumulative traffic increases along major streets within the Project Area would not be noticeable and would result in a less-than-significant impact.

NOTES — *Noise*

- ¹ A decibel is the standard unit of sound amplitude, or loudness; decibels are measured on a logarithmic scale, similar to the scale used to measure earthquake intensity. A logarithmic scale is a non-linear scale; for decibels, each increase in 10 dB multiplies the previous value by 10. For example, 50 dBA is 10 times louder than 40 dBA, while 60 dBA is 100 times louder than 40 dBA.
- ² L_{eq} , the equivalent steady-state sound level, is the average acoustic energy content of noise for a stated period of time. The L_{eq} of two different time-varying noise events are the same if the events deliver the same acoustic energy to the ear during exposure, no matter what time of the day or night they occur, unlike some other measurements that adjust for differences in noise sensitivity at night.
- ³ L_{dn} is a day-night average noise level, a 24-hour average L_{eq} ; it takes into account the greater sensitivity of persons to nighttime noise and adds 10 dBA to the noise level added during the hours of 10:00 p.m. to 7:00 a.m.
- ⁴ CNEL is a community noise equivalent level 24-hour average noise similar to L_{dn} but with an additional 5 dBA added during the hours of 7 p.m. to 10:00 p.m. to account for sensitivity to nighttime noise.
- ⁵ Minnesota Pollution Control Agency, *An Introduction to Sound Basics*, May 1983.
- ⁶ Federal Transit Administration, Transit Noise and Vibration Impact Assessment, DOT-T-95-16, April 1995, Table 6-10. Shielding provided by a row of buildings provided the gaps in the row of buildings is less than 1/3 of the length of the row.
- ⁷ San Francisco Planning Department, Environmental Protection - an Element of the Master Plan of the City and County of San Francisco, 1974.
- ⁸ Federal Transit Administration - U.S. DOT, City and County of San Francisco Planning Department, *Third Street Light Rail Project FEIS/FEIR*, November 1998. SCH No. 96102097. SF Case File No. 96.281E.
- ⁹ Sidney A. Shapiro, *The Dormant Noise Control Act and Options to Abate Noise Pollution*. For the Administrative Conference of the United States, November 1991.
- ¹⁰ Uniform Building Code, California Code of Regulations, Title 24, Part 2 - a portion of the California Building Standards Code.
- ¹¹ U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974, Appendix B, Table 4.



J. CULTURAL RESOURCES

This section includes information on cultural resources in the Project Area, including recent surveys and regulations related to cultural resources. This section also identifies potentially significant impacts to cultural resources resulting from project implementation. For purposes of this EIR, the term cultural resources refers to prehistoric and historical archaeological resources and historic architectural resources.

SETTING

PAST ENVIRONMENT

During the past 15,000 years, the San Francisco Bay region has been subject to significant environmental changes, the most important being the rise in sea level following the Wisconsin Glacial Period. Roughly 10,000 years ago, ocean waters began entering the Golden Gate, flooding the mouth of a large river and its surrounding lowlands. Salt water and two inland drainages, the Sacramento and San Joaquin Rivers, then combined to create the San Francisco Bay. Over time, large quantities of interior sediments poured into the Bay, forming thick mud deposits at the mouths of creeks and streams. These silty accumulations were exposed as mudflats during low tides and resulted in the growth and maintenance of marshes along the Bay shores.

Throughout prehistoric times (and well into the twentieth century), two of the most visible features along the eastern San Francisco shoreline were Islais Creek and its cove and the South Basin. For thousands of years, Islais Creek flowed east from Twin Peaks, draining an area of 3,000 acres and creating a broad salt marsh before discharging its waters into the Bay. Precita Creek created an additional marsh, which measured 600 to 800 feet across, in the crescent-shaped cove and inlets between Hunters Point and Candlestick Point, known collectively as South Basin. These marshes were to become highly important to prehistoric populations, which the archaeological record suggests began arriving in the Bay Area more than 5,000 years ago. Large marshlands surrounded Islais Creek and lay at the edge of the Bayview

Valley, providing a rich and vast range of subsistence resources. Adjacent to the marshlands were terraced areas, teeming with deer, rabbit, birds and other small game. Together these shoreline environments would have been favorable locales for prehistoric habitation and utilization. Nearly all the identified prehistoric archaeological sites recorded along the San Francisco Peninsula shoreline indicate long-term, permanent settlement and contain extensive shellmounds that have yielded artifact assemblages and cultural features.

PREHISTORIC PERIOD

Throughout prehistoric times the San Francisco Bay region was sparsely populated. The native people surrounding San Francisco Bay at the time Europeans arrived spoke five distinct languages (and their dialects): Wappo, Patwin, Bay Miwok, Plains Miwok and Costanoan (Ohlone). Costanoan, a member of the Utian language family, was spoken throughout the Santa Clara Valley and foothills as well as along much of the East Bay and on the San Francisco Peninsula. Before the arrival of Costanoan peoples, it is believed that Hokan-speaking population lived in the San Francisco Peninsula who were linguistically and culturally distinct from the later Costanoan.

The northern tip of the San Francisco Peninsula, which was within the Yelamu tribal territory, consisted of no more than 160 individuals. The Yelamu spent much of the year split into three semisedentary village groups. One group moved seasonally along Mission Creek, from the village of Sitolintac on the Bay shore, to the village of Chutchui 2 or 3 miles further inland. The second group moved between Amuctac and Tubsinte villages in the Visitacion Valley area, and a third cluster of families lived seasonally near the beach area facing the sea and the Golden Gate (Petlenuc).

The structures of the Yelamu consisted of domed, thatched houses, sweat-houses and storage structures. Yelamu technology included woven items such as fishing nets, and ground stone tools, fashioned from sedimentary and metamorphic rocks, including manos, metates, mortars, pestles and smoking pipes. Chipped stone tools of obsidian and chert included projectile points, scrapers, and blades. Bone items consisted of lacing and weaving awls, scrapers, and whistles. Wooden items included mortars, pestles, cooking utensils, and awls. Shell was used

for spoons and in fashioning shell bead and pendant jewelry. The Yelamu played a key role in regional trade, transporting obsidian and other goods from the north and east across the Bay and down the Peninsula, while bringing coastal shells to the East Bay.

HISTORIC PERIOD

On March 27, 1776, the Spanish, led by Juan Bautista de Anza and his soldiers, entered Yelamu territory and set about exploring the entire present-day San Francisco region, including the village of Chutchui on Mission Creek. Not long after their arrival, the colonists began building the first Mission San Francisco de Asís (Mission Dolores) church, living quarters, and corrals, possibly near the site of the village of Chutchui, which had been scorched by members of the Ssalson tribe, who lived some 12 miles to the south and abandoned by the Yelamu.

On June 24, 1777, three Yelamu males were baptized at Mission Dolores. By 1780 most Yelamu villagers under the age of 20 as well as five married couples had been baptized at Mission Dolores. During the 1780s, native people were taken to the mission from dozens of villages throughout the San Francisco Peninsula as well as from the East Bay and North Bay areas. A permanent mission (at present-day Sixteenth and Dolores Streets), was dedicated on April 3, 1791. By the end of the decade, a small village had grown up around the mission consisting of the homes of soldiers' families and the workshops of the converts.

During the Spanish era, California remained under sovereign domain. After Mexico gained its independence from Spain in 1822, the new government systematically began granting large parcels of land to individuals who, to a great extent, engaged in the cattle and tallow trade. The Project Area is located within the boundaries of the former 4,446-acre Rancho Rincón de las Salinas y Potrero Viejo, which fronted San Francisco Bay between Hunters and Candlestick Points. The rancho was roughly bound by the current Islais Creek Channel/Cesar Chavez Street on the north and Guerrero/San Jose Avenues on the west. The southern boundary stretched through present-day John McLaren Park and Bay View Park to the shoreline.

Rancho Rincón de las Salinas y Potrero Viejo was granted to José Cornelio Bernal on October 10, 1839, by Governor José Figueroa. In 1843, Bernal, with the help of Native American laborers, constructed an adobe on his rancho at present-day Duncan Street, between San Jose Avenue and Valencia Street. Just north of his home, approximately 75 feet from Cesar Chavez Street, Bernal built a stone wall to mark the upper border of his rancho as well as to enclose his livestock. The site of both the Bernal family home and wall is less than two miles west of the Project Area.

On January 24, 1848, James Marshall discovered gold in the Sierra foothills. Nine days later, on February 2, 1848, the Treaty of Guadalupe-Hidalgo was signed and California became part of the United States. The discovery of gold in the Sierra foothills and the resulting influx of people saw San Francisco's population grow from 800 in early 1848 to 57,000 by 1860. By the 1860s dozens of newcomers had squatted on or purchased much of the Bernal land.

During the early 1860s, the Bay View Turnpike was built just east of the San Bruno Road, crossing the Islais Creek saltmarsh on an earth-filled dike and then turning southeast and continuing along present-day Oakdale Avenue. A third roadway involved both Long Bridge and the Potrero and Bay View Railroad trestle. Long Bridge, completed in 1865, consisted of a mile-long, trestle roadway that stretched from Fourth and Berry Streets (across the still-submerged Mission Bay) to the Potrero Point Peninsula (at Nineteenth and Third Streets). In 1867, the Islais Creek Cove and marshlands were bridged by a second mile-long trestle that ran from the southern edge of Potrero Point Peninsula (at Tubbs and Third Streets) to the Hunters Point shoreline (at Innes Avenue and Third Street). Laid upon the trestle were the double tracks of the horse-drawn Potrero and Bay View Railroad, which continued down Third Street (Railroad Avenue) to at least Armstrong Avenue. Together, these roadways opened the isolated southeast Bayview Hunters Point area to urban development.

According to pre-1900 census information, Bayview Hunters Point was one of the more racially integrated areas of the City. San Francisco was the leading social, cultural, and economic center for African Americans throughout California during the 1800s, containing the largest black population in the state until 1900 when it was surpassed by Los Angeles.

In Bayview Hunters Point, a small population of Chinese settled close to the waterfront, drawn by the establishment of shrimping facilities built in the late 1800s. A small number of Chinese-owned restaurants and shops were built nearby, although most frequented Chinatown as the major cultural and retail goods center.

While the Hunters family still resided in the area, several wealthy San Franciscans built what was touted as the fastest horse racing track of its kind in the world at Candlestick Point. The actual construction of the race track around 1870 included the cutting and hauling of sand dune deposits by Chinese immigrant laborers using shovels and hand carts.

The major selling point of the new town of "South San Francisco" and Hunters Point was the availability of deep water close to shore. Dry-docking ships for maintenance and repair became a major industry associated with this type of waterfront, and a number of companies such as Bethlehem built dry dock facilities.

The Navy became interested in the Hunters Point area as early as 1908 when Admiral Perry's "Great White Fleet" circled the world and sailed into San Francisco Bay, only to find the waters of the US Navy Ship Repair Yard at Mare Island too shallow. He finally proceeded to the privately held drydocks at Hunters Point, where the water was deep enough to dock the huge ships. Eventually the Navy would buy Bethlehem's drydock facilities, taking possession on December 18, 1941, only eleven days after the bombing of Pearl Harbor.

The entire Chinese community and shrimping facilities located on the waterfront were evicted by Navy facility expansion in 1938. The San Francisco Fire Department was called upon to burn down the buildings as their former owners and tenants looked on. With the advent of war in 1941, an adjacent residential area was also seized, requiring 20 families to relocate within 48 hours. By the end of World War II in 1947, the Navy controlled almost 1,000 acres of Bayview Hunters Point, with facilities so massive the largest warship in the world could be accommodated here.

What had remained a rural small town transformed dramatically as a result of World War II. The installation of the Hunters Point Naval Shipyard, accompanying steel production, and warship construction with other port terminal activities turned Bayview Hunters Point into a

regional industrial center. The shoreline changed almost overnight with new industrial infill projects, construction and shipbuilding crews ran 24-hour shifts, and large numbers of workers inundated the area.

After the war, economic opportunities for African Americans, women, and other minorities were severely curtailed as soldiers returned and demanded their jobs back. By the late 1960s and early 1970s, shipyard operations began to decline due to diminishing naval repair needs. Citywide, heavy and light industrial bases were shrinking as businesses relocated plants and blue-collar employment to suburban areas in surrounding counties. When Bayview Hunters Point jobs contracted, so did its population: from a post-war peak of 50,000 in 1950 to 20,000 in 1970.

Today, approximately 34,000 people call this neighborhood home. Some residents are second and third generation children of the original immigrant families. Many came to live here because of shipbuilding activities during World War II, primarily from the southern United States. A significant number of more recent residents moved here when other neighborhoods of the City became too expensive to live in or were demolished during the days of Urban Renewal. Others are new immigrants seeking a new life in the United States, and several are artists who bring another dimension to the creative spirit of place emerging in Bayview Hunters Point.

CULTURAL RESOURCE SURVEYS

Previous Surveys and Studies

Archaeological Surveys

Between 1906 and 1910, UC Berkeley archaeologist Nels C. Nelson conducted an intensive archaeological survey during which he systematically documented prehistoric archeological deposits between Fort Ross in the north and Monterey Bay in the south. Nelson recorded over 400 shell heaps, earth mounds, and temporary camp sites. He identified and mapped 18 sites within present-day San Francisco, half of which lay within or near the Project Area.

Numerous site-specific archaeological surveys have occurred throughout the Project Area in more recent years, primarily as part of individual project approvals.

Architectural Surveys

Prior surveys of architectural resources include the 1976 Citywide Survey of architecturally significant buildings undertaken by San Francisco's Foundation for Architectural Heritage and published in an update of the 1968 document *Here Today*, the *San Francisco General Plan* and *Planning Code* listings of San Francisco's designated historical landmarks, and state and federal listings.

The 1976 Citywide Survey awarded approximately 10 percent of the city's entire stock of buildings a rating for architectural merit, ranging from "0" (contextually significant) to "5" (highest overall significance). Only a small portion of the Project Area was included in the 1976 Citywide Survey, primarily focused on a few blocks along Third Street between Hudson and Oakdale Avenues in the Town Center Activity Node and in southern portions of the Northern Gateway Activity Node. The survey found 55 notable architectural resources, as shown in Table B-1, Appendix B.

In 1990, the Landmarks Preservation Advisory Board completed an architectural and historical survey of unreinforced masonry buildings (UMBs) in San Francisco. The San Francisco DBI has compiled a list of approximately 2,080 UMBs in the City. Of these, about 1,675 are subject to the UMB Ordinance, which was passed in 1992, and which requires that these buildings be seismically strengthened by a deadline (from 1997 to 2006) that is based on the "risk level" to which each building is assigned. Only one UMB was identified in the Project Area: the Bayview Police Station at 1676 Newcomb Avenue in the Town Center Activity Node.

Cultural Resource Surveys Completed for the Project

Archaeological Surveys

An archaeological resources investigation of the Project Area was completed by Chavez and Associates from 1998 to 2001, and updated in 2004.¹ Historical research was conducted at the

Bancroft Library at the University of California in Berkeley and the San Francisco History Room at the San Francisco Main Library. Several map sources were utilized, including U.S. Coast Survey, U.S. Coast and Geodetic Survey, Geological Survey, and Sanborn Fire Insurance Company maps.

A records search of archaeological and architectural resources in the Project Area was completed at the Historical Resources Information System, Northwest Information Center at Sonoma State University in Rohnert Park (File No. 98-682 and 01-694). Archeological reports, on file at the San Francisco Planning Department were also examined. In general, the urban landscape is generally not an environment conducive to productive archaeological surface reconnaissance, as the obstruction of the ground surface by roadway pavement, sidewalks and dense structural placement leaves little in the way of detectable archaeological evidence. The results of the archaeological investigation are summarized below in the Findings section.

Architectural Surveys

An architectural resources survey of the Project Area, completed by Carey & Company from 1998 to 2001, and updated in 2004, identified and ranked architectural resources in terms of their historical significance.² The architectural survey involved historical research, archival research from the Northwest Information Center, and field investigations. The reconnaissance-level survey focused on historic architectural resources within the seven activity nodes and was not a comprehensive survey of the entire Project Area. Buildings were viewed, assigned approximate construction dates based on architectural characteristics, and photographed. Research provided additional information on various structures. The results of this survey are discussed below in the Findings section and are summarized in Table B-1, Appendix B.

SUMMARY OF FINDINGS

Archaeological Resources

There are six known prehistoric archaeological sites in the Project Area. Due to the sensitive nature of these sites, only general locations by activity node are provided.

- CA-SFr-9 (Nelson Site No. 389) may have been situated beneath the present-day Candlestick Point Activity Node. This site was probably a shellmound and was recorded by Nelson.
- CA-SFr-10 (Nelson Site No. 387a) is located in the South Basin Activity Node. There is no definite information concerning this probable shellmound, which was recorded by Nelson in 1910.
- CA-SFr-11 (Nelson Site No. 390), also known as the Thomas-Hawes Mound, is a shellmound situated on the shoreline of the former marshlands in the South Basin Activity Node. The site was identified through deep auger borings and is buried beneath at least 10 feet of fill.
- CA-SFr-15 (Nelson Site No. 389a) is the only archaeological site recorded within the Northern Gateway Activity Node. It is believed to have been a prehistoric shell midden; however, Nelson's 1909 records regarding this site have been lost and, as a result, its exact location is uncertain.
- CA-SFr-110, also known as the Griffith-Shafter Shellmound, is located in the South Basin Activity Node. Auger borings in 1981 indicate that approximately 4 to 7 feet of the site's midden is buried below 8 to 10 feet of fill. The shellmound originally lay along the South Basin shoreline.
- CA-SFr-124 is within the Town Center Activity Node. Although the Northwest Information Center has no site record for this resource, the site "proved to be an extensive of shell midden covering an area measuring 400 feet x 205 feet (120 m x 61.5 m) and was documented to be at least 12 inches (30 cm) thick. All observations indicate that the site was redeposited in historic times. However, there remains the possibility that an intact, prehistoric occupation may be present somewhere in the observed area of shell midden scatter."

Historic archaeological resources which may potentially occur throughout the Project Area, as identified by Chavez and Associates' archaeological resources investigation, are discussed in the Cultural Resource Findings by Activity Node section below.

Historic Architectural Resources

There are no historic architectural resources listed on the National Register of Historic Places in any of the Project Area's seven activity nodes. However, two buildings in the Project Area have been designated with National Register status codes by the California Office of Historic Preservation (OHP):

- Link Belt Company Building (320 Paul Avenue) constructed in 1930 and rated 3S by OHP (appears individually eligible for the National Register). This building is located in the South Basin Activity Node.
- Bayview Police Station (1676 Newcomb Avenue) constructed in 1911 and rated 4S by OHP (may become individually eligible for the National Register if certain criteria are met). This building is located in the Town Center Activity Node.

No California Historical Landmarks were identified in the Project Area.

The *San Francisco Planning Code* also identifies the following two San Francisco Landmarks located within the Project Area:

- South San Francisco Opera House (Landmark No. 8, 1601 Newcomb Avenue), located in the Town Center Activity Node.
- Hunters Point Springs and Albion Brewery (Landmark No. 60, 881 Innes Avenue), located in the Hunters Point Shoreline Activity Node.

As discussed above, only a small portion of the Project Area was included in the 1976 Citywide Survey, which focused primarily on the areas now described as the Town Center Activity Node, the historical heart of the Bayview District, and the southern portion of the Northern Gateway Activity Node.

Additional information on notable architectural resources identified in the Carey & Company reconnaissance survey of 1998 to 2004 are described in the Cultural Resources Findings by Activity Node section, below and shown in Table B-1, Appendix B. Each resource identified in the Carey & Company reconnaissance survey was assigned a rating 1 to 6, based on the National Register of Historic Places status codes. These ratings have the following descriptions:

1. The property is listed on the National Register as an individual property and/or as a contributor to a district.

2. The property has been determined eligible for the National Register in a formal process as an individual property and/or as a contributor to a district.
3. The reviewer believes that the property appears eligible for the National Register as an individual property and/or as a contributor to a district.
4. The property might become eligible for the National Register as an individual property and/or as a contributor to a district if any of a number of criteria is met.
5. The property appears ineligible for the National Register as an individual property and/or as a contributor to a district however it is still of local interest.
6. The property is not eligible for the National Register as individual property and/or as a contributor to a district.

Of the 252 structures surveyed by Carey & Company in the Project Area, five were rated "3," 32 were rated "4," 198 were rated "5," and 17 were rated "6." None of the structures surveyed were rated as "1" or "2." These figures indicate that while few National Register-eligible resources are located in the Project Area, a majority of the surveyed resources appear to be of local historical interest, and would require further review and consultation to determine if they are an historic resource for CEQA purposes.³

CULTURAL RESOURCE FINDINGS BY ACTIVITY NODE

Northern Gateway Activity Node

Archaeological Resources

Prehistory. During prehistoric times the Northern Gateway Activity Node survey area was all but submerged beneath the Islais and Precita Creek marshlands and the Islais Creek Cove. The only dry land lay above the shoreline, which stretched from the present-day corner of Phelps Street and Jerrold Avenue to the corner of Mendell Street and Evans Avenue. At low tide there was often no water in Islais and Precita Creeks, thus rendering them mere basins that filled and emptied with the ebb and flow of the tide; at low tide the Islais Creek Cove (at Third Street) measured less than a foot in depth. As mentioned previously, Site CA-SFr-15 (Nelson Site No. 389a) is the only archaeological site recorded within this activity node.

History. After the Potrero and Bay View Railroad trestle was constructed between Potrero and Hunters Points in the late 1860s, connecting the Bayview Hunters Point with downtown San Francisco, growth slowly ensued; by 1869 nearly a dozen structures and an early dirt path were present on the high ground. The Northern Gateway Activity Node area began to develop with the creation of Butchertown, a district dominated by slaughter houses, meat-packing plants, tanneries and saddle shops. During the late 1870s/early 1880s Butchertown's satellite industries grew into a crowded community consisting of dozens of one- to two-story, wood-framed structures built over decked pilings at water's edge. By the 1880s the blocks east of the Third Street corridor and south of Butchertown accommodated roughly three dozen, one-to two-story, wood-framed dwellings and flat buildings, many of which fronted Galvez Avenue; by 1913 over 60 residential structures were present between Fairfax and Jerrold Avenues. By the turn of the twentieth century the entire Potrero and Bay View Railroad trestle had been filled in, creating a solid embankment with a culvert through which the tide could ebb and flow. The shored-up causeway resulted in drier ground around the outer perimeter of the Islais Creek marshlands and by 1910 coal yards, cattle corrals, sheep pens and quarantine stock yards covered much of Third Street. In 1925, the Islais Creek reclamation project began with the construction of a seawall and dredging of Islais Creek. A rock seawall that measured approximately 2,090 feet long was placed along the northern shore of Islais Creek from Third Street to the Southern Pacific Railroad right of way (Mississippi Street).

Butchertown and its satellite industries, which continued to thrive throughout the first half of the twentieth century, extended north along the east side of Third Street from Fairfax Avenue to beyond Cargo Way and east along both sides of Evans Street. In 1950 sheep pens and corrals, wholesale butchers, casing and sausage factories, packing companies, and tallow and soap works blanketed the area. During the early 1950s the last section of the Northern Gateway Activity Node was filled when the region around Cargo Way and Mendell Street was reclaimed. Over the years all the Butchertown structures and at least 17 dwellings were razed east of Third Street between Cargo Way and Galvez Avenue. By the 1980s new one-to two-story commercial buildings had been constructed throughout this area, most of which are associated with the IBIP.

Historic Architectural Resources

Evans Avenue roughly divides the Northern Gateway Activity Node into northern and southern sections. To the north, particularly in the immediate vicinity of the Islais Creek channel, the dominant building type is non-historic twentieth-century industrial. To the south, however, the building type pattern becomes more varied, with examples of both residential and mixed-use construction. Most of the buildings in this activity node are Queen Anne residential. The only two notable non-residential buildings are located in the northern section of the activity node and are twentieth-century styles.

The reconnaissance survey prepared by Carey & Company assigned four properties with a status code of “4,” indicating that they may be eligible for listing in the National Register if certain criteria are met. The survey also assigned 23 properties with a status code of “5,” indicating that these properties, although not eligible for listing in the National Register of Historic Places, may possess historic significance at the local level (see Table B-1 in Appendix B and Figure III.J-1) Much of the southern portion of this activity node was also included in the 1976 Citywide Survey.

Town Center Activity Node

Archaeological Resources

Prehistory. The Town Center Activity Node has always been dry land, except for the region around Jerrold Avenue and Quint Street, which was earlier inundated by the Islais Creek marshlands. The former Islais Creek Cove and marshlands to the north would have provided prehistoric populations with an abundance of important subsistence resources, as would the interior upland terrain. As mentioned previously, one archaeological site (CA-SFr-124) was recorded in the Town Center Activity Node. However, whether or not the site has always been dry land is not necessarily relevant to the potential for archeological resources to be present, since archeological resources can be present below the bottom of submerged surfaces.



TYPICAL QUEEN ANNE RESIDENCE, C. 1900



TYPICAL ITALIANATE RESIDENCE, C. 1880

SOURCE: Carey & Company

8.5-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-1 RESIDENCES IN NORTHERN GATEWAY ACTIVITY NODE

History. During the 1850s, a two-building homestead belonging to the Haley family was situated along the present-day Newcomb Avenue alignment near Quint Street, while farm buildings belonging to the Burdis family stood scattered within an oak grove between present-day Phelps and Newhall Streets, just north of McKinnon Avenue. Two years after the Potrero and Bay View Railroad trestle was completed, nearly a dozen homesteads had been established within the boundaries of this activity node. During the 1870s and 1880s, the current roadway alignments took shape and new residential and commercial buildings were constructed, particularly along and near Third Street. Because the Potrero and Bay View Railroad had been running down Third Street since 1867, the blocks fronting that transportation artery were largely commercial in nature. The surrounding residential area consisted of over 100 one- to two-story, wood-framed dwellings and flat buildings (and their outbuildings, windmills, and small stables), which for the most part stood along the backroads. The people living in these neighborhoods worshiped at a number of churches, including the Gothic-style All Hallows Roman Catholic Church, which was constructed at the corner of Palou Avenue and Newhall Street in about 1886. In 1888 the two-story, wood-framed South San Francisco/Bayview Opera House was constructed at the southwest corner of Newcomb Avenue and Mendell Street.

Following the 1906 earthquake and fire, many South of Market residents, whose homes had been burnt to the ground, began moving south into the Bayview Hunters Point area. In 1908, the Southern Pacific Bayshore Cutoff (present-day Caltrain) railroad tracks had been laid down, extending across the west side of the Town Center Activity Node. From the 1910s until the 1950s the commercial buildings along and near Third Street housed numerous stores as well as banks, movie theaters, a public library, and a United States post office; throughout these decades at least a dozen gas stations and several used and new car lots also lined the roadway. The Sanborn maps suggest that in 1988 more than 125 buildings dating from at least the late 1800s, and at least a dozen commercial buildings from the same era, continued to line the roadways within the Town Center Activity Node.

Historic Architectural Resources

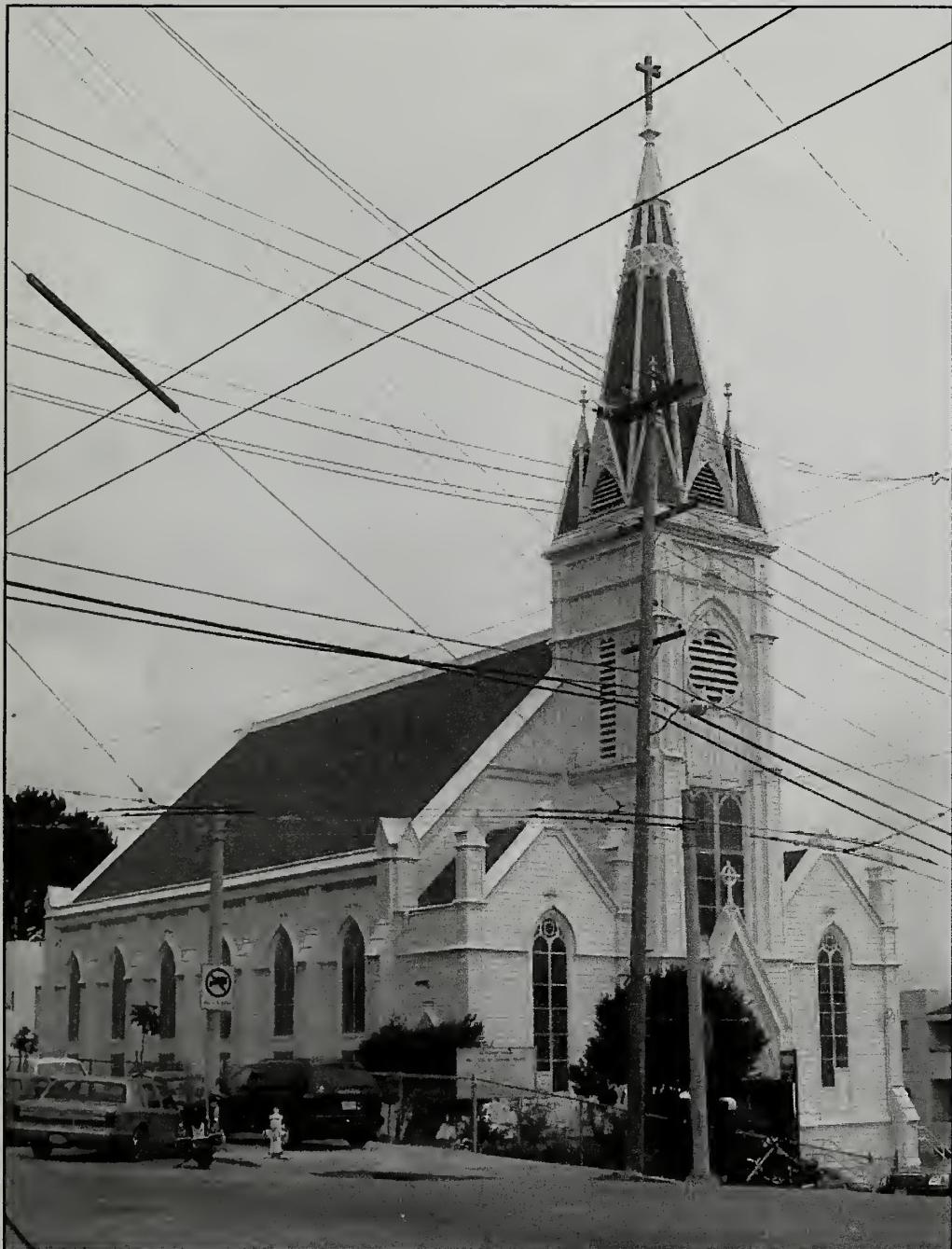
The greatest concentration of architectural resources in the Project Area is located in the Town Center Activity Node, the historical and cultural heart of the Bayview Hunters Point neighborhood. Third Street is the primary feature within the Town Center Activity Node, giving the activity node a distinctly commercial, cultural and social character. Most of the Project Area's historic buildings are located in the Town Center Activity Node, including the circa 1888 Bayview Opera House (San Francisco Landmark No. 8) and several churches. Many of this area's notable buildings are commercial, containing ground-floor storefronts with one or two stories of residential above. Most of the residential uses located east and west of Third Street are one- or two-story private homes. Styles for both commercial and residential range from Italianate and Queen Anne from the late nineteenth-century to Mediterranean and Moderne from the early twentieth-century. These styles, along with several exceptions such as Beaux Arts, Carpenter Gothic, and Edwardian, provide the best representation of the Project Area's architectural history among the seven activity nodes.

The historic resources survey prepared by Carey & Company identified four properties with a status code of "3," (circa 1886 All Hallows Roman Catholic Church at 1440 Newhall Street, the 1888 Bayview Opera House, circa 1865 Gothic residence at 1547 Oakdale Avenue, and circa 1880 Victorian residence at 4417-23 Third Street). Carey & Company also assigned 24 properties with a status code of "4," (one of which is the OHP-rated 1911 Bayview Police Station at 1676 Newcomb Avenue), 98 properties with a status code of "5," two with a combination "4/5" status code, and two with a combination "5/6" status code (see Table B-1 in Appendix B and Figures III.J-2, III.J-3, p. III.J-18, III.J-4, p. III.J-19) This area was also included in the 1976 Citywide Survey, which found many notable architectural resources.

Health Center Activity Node

Archaeological Resources

Prehistory. The Health Center Activity Node is located along and within the former marshlands of South Basin. The marshlands stretched from the approximate Hawes Street



CARPENTER GOTHIC CHURCH, 1886

SOURCE: Carey & Company

8-5-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-2 CHURCH IN TOWN CENTER ACTIVITY NODE



TYPICAL ITALIANATE RESIDENCE, C.1880

SOURCE: Carey & Company

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-3 RESIDENCE IN TOWN CENTER ACTIVITY NODE



BAYVIEW OPERA HOUSE, C. 1888



TYPICAL MIXED-USE VICTORIAN, C. 1890

SOURCE: Carey & Company

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-4 COMMUNITY AND MIXED-USE IN TOWN CENTER ACTIVITY NODE

shoreline (between Thomas and Carroll Avenues) west nearly to Third Street. The low-lying valley west of Third Street sat between sea level and 30 feet in elevation. No prehistoric archaeological sites are recorded within the Health Center Activity Node.

History. Early maps indicate that the entire region was devoid of activity as late as 1852; however, by 1861 one lone structure stood in the northwest corner of Yosemite Avenue and Lane Street. Also during the early 1860s, the marshlands along the east side of present-day Third Street were partially reclaimed in order to create Bay View Park (1863–1890s) and its oval-shaped racetrack, both of which were enclosed by Carroll Avenue, Third Street, Wallace Avenue and Hawes Street. Horse-drawn railroad cars began running down present-day Third Street, carrying San Franciscans out to the racetrack. The racetrack structures had been demolished by the turn of the twentieth century. The 1914 Sanborn maps indicate that the Health Center Activity Node contained several one- to two-story, wood-framed dwellings scattered among and around vegetable gardens. By the late 1920s, the present-day light-industrial character west of Third Street in this activity node began to develop. By 1950 all the gardens were gone and more than a dozen one- to three-story, wood-framed, reinforced-concrete or corrugated-metal light industrial buildings had been constructed west of Third Street. During the early 1960s, one- to two-story buildings were constructed across these newly cleared or previously vacant blocks between Keith and Jennings Streets. Over time they housed numerous light-industries, bottle works, beverage warehouses, and the Southeast Health Center.

Historic Architectural Resources

The Health Center Activity Node is divided by Third Street, where approximately half the notable buildings in the activity node as well as a large community park and playground are located. The activity node derives its name from the Southeast Health Center located at 2401 Keith Street whose contemporary facilities dominate the eastern half of the activity node. Those areas not affiliated with either Third Street or the Southeast Health Center contain primarily late nineteenth-century residential buildings in styles such as Queen Anne and Folk Victorian with several other examples of slightly later architectural trends such as

Mediterranean and Moderne. Carey & Company has assigned one property with a status code of "4" and another property with a status code of "5." (see Table B-1 in Appendix B and Figure III.J-5).

Oakinba Activity Node

Archaeological Resources

Prehistory. Except for its most northern, western and southern peripheries, during prehistoric times the Oakinba Activity Node was completely inundated by waters of Islais and Precita Creeks during high tide. However, as previously noted, this may not be relevant to the assessment of potential presence of archeological resources. Prehistoric resources may be present beneath formerly submerged lands. The archaeological resources investigation prepared for this project did not identify any prehistoric archaeological sites within the Oakinba Activity Node. However, CA-SFr-15 (Nelson Site No. 389a) is located just over a block east of the Caltrain tracks within the Northern Gateway Activity Node.

History. Most of the Oakinba Activity Node was void of development in the early 1850s. However, during the late 1850s, the San Bruno Turnpike, was constructed near present-day Bayshore Boulevard and Cortland Avenue. During the late 1800s and early 1900s this corridor became more developed with various residential, business, and industrial uses. Several structures that were in existence during the early 1850s, which were located above the south side of the Islais Creek marshlands were likely associated with the Haley family homeplace. In order to reach the Haley homeplace and other outlying farmsteads, roadways were constructed south from the City. Together these roadways opened the then isolated southeast Bayview Hunters Point area and led to the rise of Homestead Associations which remained in place into the 1920s. During the late 1920s the filling of the Islais Creek marshlands began at which point most of the earlier structures within the area were removed and San Bruno Road was reconfigured and re-named Bayshore Boulevard. By 1907 the present-day Caltrain tracks were constructed across the Islais Creek marshlands; the Caltrain right-of-way now defines the eastern border of the activity node.



TYPICAL QUEEN ANNE (SPINDLEWORK) RESIDENCE, C. 1880



TYPICAL EARLY INDUSTRIAL MODERN WAREHOUSE, C. 1920

SOURCE: Carey & Company

8.5-04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-5 RESIDENCE AND WAREHOUSE IN HEALTH CENTER ACTIVITY NODE

During the earlier part of the twentieth century, the San Francisco business community began exploring the advantages of developing the Islais Creek marshland region for industry. Several reclamation districts were established including the 280-acre Islais Creek Reclamation District west of Third Street. The reclamation project began in 1925 with the construction of a seawall and dredging of Islais Creek. A rock seawall was placed along the northern shore of Islais Creek from Third Street to the Southern Pacific Railroad right-of-way. The State Harbor Commission then dredged Islais Creek from the pierhead line to the Southern Pacific Railway right of way. A total of 6,500,000 cubic yards of materials were dredged and reused as fill within the area. By the 1930s, the Islais Creek marshlands were filled to City grade resulting in the removal of most of the early San Bruno Avenue commercial and light-industrial buildings. Some residential dwellings and commercial buildings north and south of Oakland Avenue remained; however, surrounding poultry and livestock-related yards and structures were removed in the 1930s.

Over the next thirty-eight years the vacant lots on the filled marshlands were built out to accommodate commercial and light-industrial businesses including warehousing. Between 1953 and 1965 the Bayshore Freeway, US 101, was built along the west side of the activity node, the Produce Terminal opened and Highway 280 was constructed. By 1988, construction of more than 70 residential dwellings, Fire House No. 37, the PG&E Bayshore Substation, San Francisco Water Department buildings, gas stations and numerous parking lots had occurred within the activity node.

Historic Architectural Resources

The Oakinba Activity Node is bound by Cesar Chavez Street on the north, US 101 on the west, the Caltrain railroad tracks on the east, and Industrial Way on the south, with some exceptions. The activity node is overwhelmingly industrial in character, primarily consisting of large-scale, mid-twentieth-century warehouses, many of which fill entire blocks. Some early-twentieth-century commercial and industrial vernacular uses front Bayshore Boulevard and on the blocks immediately east of this major arterial thoroughfare. The remainder of the architectural resources are late-nineteenth-and early-twentieth-century residences located in the

southeast corner of the in the Oakinba Activity Node of varying architectural styles. The historic resources survey prepared for this project identified 44 properties in the Oakinba Activity Node with a status code of "5" and six properties with a combination status code of "5/6" (see Table B-1 in Appendix B and Figure III.J-6).

South Basin Activity Node

Archaeological Resources

Prehistory. The eastern half of this area is largely situated on land that was earlier part of the South Basin Cove and marshlands, while the western half extends across the low-lying Bayview Valley which rose from sea level to approximately 40 feet in elevation. The exceptions were the 80-foot-high rise at Paul Avenue and Bayshore Boulevard; the 85-foot-high Thomas Avenue Hill in that roadway's alignment, midway between Hawes and Griffith Street; and the northern slopes of the 125-foot-high Carroll Avenue Hill (east of Hawes Street), whose peak loomed just outside the activity node. The towering 480-foot tall Bayview Hill is situated along the South side of the activity node. As noted previously, there are three archaeological sites recorded within this activity node (CA-SFr-10, -11, and 110), all of which are shellmounds along historic shoreline margins.

History. What is now the South Basin Activity Node was partially within the 2,000-lot South San Francisco Homestead and Railroad Association, which was incorporated on November 15, 1861 and located east of Third Street. Many of the homestead's parcels extended into the South Basin Activity Node. Following the 1865 completion of Long Bridge and the construction of the Potrero and Bay View Railroad down Third Street in 1867, as well as the late-1860s incorporations of several Homestead Associations along either side of Third Street, more people began settling in the activity node area. Several structures were located either near or fronting on Third Street between Gilman/Paul and Jamestown Avenues, some of which may have been associated with Chinese shrimp camps or boat building enterprises. However, no evidence was uncovered to suggest that either of these activities were present on the South Basin shoreline. Situated just north of present-day Carroll Avenue was the Carroll Avenue



TYPICAL COMMERCIAL VERNACULAR BUILDING, C. 1920



TYPICAL REVIVAL STYLE RESIDENTIAL BUILDING C. 1925

SOURCE: Carey & Company

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-6 COMMERCIAL AND RESIDENTIAL IN OAKINBA ACTIVITY NODE

Pier. The pier extended from a large, shoreline building and had three or four associated structures located on the south side of Carroll Avenue. A 200-foot-long pier, which ran southeast from the foot of Thomas Avenue just east of Griffith Street, was likely built before the 1867 Potrero and Bay View Railroad arrived, and used for transporting dairy products, livestock, grain, and agricultural produce to San Francisco and for unloading goods sent from the city to the outlying Bayview Hunters Point area. By the mid-1890s many buildings, mostly small homesteads or vegetable farms, were scattered throughout the activity node. To a great extent, all of these early farms were operated by Italian, Portuguese, and Chinese gardeners until the former crowded out the Chinese and most of the Portuguese. The only turn-of-the-century industry located within this activity node was the Atlas Paving Brick Company; its structures were located in a large block bound by present-day Giants Drive, Ingerson Avenue, Griffith Street and Gilman Avenue.

The Bay View Park Seawall was built in 1863, located within the blocks bounded by Carroll Avenue, Underwood Avenue, Hawes Street and Ingalls Street. This seawall represents a part of the first major reclamation project in the Bayview Hunters Point area. During the late 1870s and early 1880s, another major reclamation project took place with the filling of a small cove that extended along either side of the present-day Griffith Street alignment between Thomas and Quesada Avenues. U.S. Geological Survey maps from the 1890s show less than seventy structures scattered across the activity node. At the turn of the twentieth century, a number of one- to three-story, wood-framed, shoreline structures east of Griffith Street were primarily light industrial and agricultural buildings and a few residences. Following the 1906 earthquake and the resulting fire, which leveled the working-class neighborhoods south of Market Street, the 1914 Sanborn maps illustrate the dramatic change that took place in the activity node due to the urgent need for new housing. While the Atlas Paving Brick Company structures and operations were still in place, within a decade the early homesteads and garden farms vanished and all the current streets, west of Griffith Street, were laid out. Families poured into the area and soon more than 200 hundred mostly one-story, wood-framed dwelling units with associated outbuildings and stables lined the roadways. The 1914 Sanborn maps

indicate that more than half the South Basin Activity Node remained under cultivation or beneath San Francisco Bay.

During the late 1920s San Bruno Road was widened, straightened, and renamed San Bruno Boulevard. Also during the late 1920s, the Atlas Paving Brick Company buildings were removed. During the 1930s and 1940s filling of the South Basin marshlands began, slowly edging eastward, and initiating the creation of the Yosemite Slough. In 1943, during WWII, the United States Housing Authority constructed the family-dwelling project known as the Double Rock War Dwellings, housing over 550 civilian shipyard employees and their families along the west side of Third Street and the north side of Paul Avenue. During the early 1950s the 85-foot-high Thomas Avenue Hill (midway between Hawes and Griffith Streets) was cut back and its soil used to reclaim more of the South Basin marshlands as well as sections of the shallow San Francisco Bay waters. During the late 1950s, in conjunction with the reclamation activities, the 125-foot high Carroll Avenue Hill was leveled, and its spoils used for further construction of the nearby Candlestick Park. Midway through the twentieth century, the residential and physical character of the activity node remained largely unchanged. In the 1970s the newly-reclaimed land along the activity node's shoreline became the Candlestick Point State Recreation Area, California's first State-owned urban park.

By the late 1980s, most of the early-twentieth-century, light-industrial buildings as well as all the Double Rock War Dwellings and Annex buildings had been demolished and replaced by more modern light-industrial buildings, factories, and warehouses. Over the next decade the activity node continued to evolve. In 1988 over 50 dwelling units and various mixed commercial and public use buildings were along Third Street, nineteen of which dated to before 1930. In addition, well over 550 dwelling units continued to line neighborhood roadways off Third Street, half of which were built before 1906 and 1929.

Historic Architectural Resources

The South Basin Activity Node encompasses areas west, south, and east of the Health Center Activity Node and is similar to the Hunters Point Shoreline Activity Node in its consistent residential character. While hundreds of residential properties are located in this activity node,

only a small percentage of these homes are considered notable, with some dating from between 1880 and 1910, and designed in the Italianate and Queen Anne building styles. The historic resources survey prepared by Carey & Company, assigned one property in the South Basin Activity Node with a status code of “3”: the 1930 Spanish Revival-style Link Belt Company Building at 320 Paul Avenue (also rated 3S by OHP). One additional property has been assigned a status code of “4,” and 27 properties have been assigned a status code of “5” (see Table B-1 in Appendix B and Figure III.J-7). Only a very small percentage of this area was included in the 1976 Citywide Survey, which found few notable architectural resources.

Hunters Point Shoreline Activity Node

Archaeological Resources

Prehistory. The Hunters Point Shoreline Activity Node stretches across the Hunters Point Peninsula, from India Basin on the north to South Basin Cove on the south. Before it was reclaimed, the Hunters Point shoreline extended roughly along present-day Hunters Point Boulevard and Innes Avenue. The terrain rose steadily from India Basin to an elevation of 220 feet at Kiska Road before dropping down to the South Basin Cove shoreline just above the current intersection of Crisp Avenue and the Earl Street alignment. No archaeological sites are recorded within the boundaries of this activity node. The closest recorded sites were three shellmounds (CA-SFr-12, -13, -14; Nelson Site Nos. 391, 392, 392a) located approximately one-quarter mile to the east (along and south of present-day Spear Street), which were destroyed when that section of the Hunters Point Peninsula was reclaimed.

History. This area was first settled by the Hunter Brothers in the 1850s. Robert Hunter built a homestead, called India Basin Ranch, near a freshwater spring at the corner of Innes Avenue and Griffith Street. Robert Hunter and his family continued to live on India Basin Ranch into the 1870s, and for years their homestead buildings were the only structures in the area. Although this area remained largely undeveloped, a number of ship/boat/barge buildings and repair businesses were established starting in the late 1860s around Evans Avenue and Keith Street. A second Hunters Point enterprise consisted of Dr. John Burnell’s Albion Brewery, which was constructed in 1870 on the east side of Griffith Street between Innes and Jerrold



TYPICAL QUEEN ANNE RESIDENCE, C. 1900



TYPICAL ITALIANATE RESIDENCE C. 1880

SOURCE: Carey & Company

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-7 RESIDENCES IN SOUTH BASIN ACTIVITY NODE

Avenues and relied on the earlier-mentioned Hunter's spring as its water supply. Although the original buildings were still intact in 1929, brewery activities had ceased earlier in the decade; only the stone tower still stands. The Albion Water Company (1913 to present) continues to use the spring as the source for its bottled drinking water. Another industry consisted of Chinese shrimp camps, two of which were located within the Hunters Point Shoreline Activity Node; one at northeast corner of present-day Davidson Avenue and Ingalls Street alignment, and another at the foot of Evans Avenue between the Ingalls and Hawes Street alignments. Nearly one dozen buildings labeled shrimp cooking, shrimp cleaning and shed were present at the camp. Numerous other farmhouses, stables, and outbuildings were located in the area by the turn of the century.

The first major physical change in the region occurred in 1917 when the construction, widening, and grading of present-day Hunters Point Boulevard/Innes Avenue began as part of a World War I effort to efficiently transport workers and materials to the Hunters Point Drydock at land's end. The most visible development in the activity node was the 1929 construction of the Hunters Point Power Plant (originally the San Francisco Steam Plant of the Great Western Power Company), southeast of the Jennings Street/Evans Avenue intersection. During the late 1920s and early 1930s, a shipbreaking operation flourished along the shoreline below Hunters Point Boulevard (between Evans Avenue and Hudson Street). After the United States entered World War II, nearly all the structures in this activity node were demolished so that the United States Housing Authority could build dozens of one- to two-story, wood-framed dormitories to house civilian shipyard employees (currently the Hunters View, Hunters Point, and Westbrook Housing Projects). The filling of the shallow waters off South Basin took place from the 1940s through early 1970s, when India Basin generally obtained its present configuration. Very few pre-1950 structures remain in the Hunters Point Shoreline Activity Node.

Historic Architectural Resources

The Hunters Point Shoreline Activity Node is overwhelmingly residential in character. Much of the activity node's geographic center consists of non-historic public housing (Hunters View,

Hunters Point, and Westbrook Housing Projects), while the encircling blocks contain primarily one- or two-story private, detached homes of varying ages and architectural styles. The Hunters Point Shoreline Activity Node contains one locally designated historic landmark: the Hunters Point Springs and Albion Brewery (Landmark No. 60, 881 Innes Avenue). The activity node also contains some non-historic industrial uses near India Basin and several churches (see Figure III.J-8). The historic resources survey prepared by Carey & Company assigned two properties with a status code of “4” and four properties with a status code of “5” (see Table B-1 in Appendix B).

Candlestick Point Activity Node

Archaeological Resources

Prehistory. Nearly all the land that presently encompasses the Candlestick Point Activity Node was originally submerged beneath the waters of San Francisco Bay. The only land was Candlestick Point, which rose steeply from the South Basin shoreline to a height of 240 feet and was itself part of the northeastern slope of the 480-foot-high Bay View Hill. As noted previously, one archaeological site (CA-SFr-9) has been recorded within of the Candlestick Point Activity Node Study Area. Immediately southwest of the activity node are two additional archaeological sites (CA-SFr-7, -8), both shellmound sites.

History. The Candlestick Point Activity Node appears to have been void of features, structures and activity until well into the twentieth century. By the turn of the twentieth century the Atlas Paving Brick Company was established in the blocks bound by present-day Giants Drive, Ingerson Avenue, Griffith Street, and Gilman Avenue. Its 200-foot-long pier stretched from the foot of Hollister Avenue into the Bay. Bay View Hill, which was part of the Charles Crocker estate, was dedicated for park purposes on December 8, 1915. By the late 1920s the Atlas Paving Brick Company buildings had all been removed and dozens of dwellings had been built in the region. Throughout the years of World War II and the late 1940s and early 1950s, the Candlestick Point Activity Node remained in its natural state. However, on November 3, 1954, the voters of San Francisco passed a \$5,000,000 bond to finance construction of Candlestick Park Stadium. Prior to constructing the stadium, the eastern and



MISSION REVIVAL CHURCH, C. 1920



TYPICAL STREAMLINED MODERN RESIDENCE, C. 1930

SOURCE: Carey & Company

8.5.04

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.J-8 CHURCH AND RESIDENCE IN HUNTERS POINT SHORELINE ACTIVITY NODE

northern slopes of Bay View Hill were cut back. The amount of soil removed may have reached 50,000 cubic yards a day, all of which was dumped into the offshore waters. Construction of the stadium at Candlestick Park took place between late 1958 and 1959. When finished it accommodated 42,500 people and 8,000 cars in the surrounding parking lot. On April 12, 1960, the San Francisco Giants played their first game at Candlestick Park Stadium. Candlestick Point State Recreation Area was established in 1974 to construct a 175-acre park along the eastern shoreline, and groundbreaking for the park was held in 1979.

Historic Architectural Resources

The Candlestick Point Activity Node is divided by Hunters Point Expressway, with the late 1950s-era Candlestick Park and its related parking lots consuming the west half and Candlestick Point State Recreation Area, Candlestick Cove, and the South Basin dominating the area's east half. To the north is a small amount of contemporary residential construction. No notable architectural resources were identified in this activity node (see Table B-1 in Appendix B).

REGULATORY FRAMEWORK

Federal Regulations

The National Register of Historic Places is the official federal list of historic resources that have architectural, historic, or cultural significance at the national, state, or local level. The National Register is administered by the Office of Historic Preservation (OHP), and is implemented by the National Park Service (NPS), an agency of the U.S. Department of the Interior. Listing of a property on the National Register does not prohibit demolition or alteration of that property, but does denote that the property is a resource worthy of recognition and protection. As noted above, no properties listed on the National Register are located in the Project Area.

State Regulations

The California Register of Historical Resources (CRHR) is the official state list of historic resources that have architectural, historic or cultural significance at the state level. The OHP administers and maintains the CRHR that includes resources listed in, or formally determined eligible for, the National Register of Historic Places and California Historical Landmarks. The CRHR can also include properties designated under local ordinances or identified through local historic resource surveys. Two properties listed on the CRHR are located in the Project Area: the Link Belt Company Building at 320 Paul Avenue in the South Basin Activity Node (rated 3S by OHP), and the Bayview Police Station at 1676 Newcomb Avenue in the Town Center Activity Node (rated 4S by OHP). No California Historical Landmarks are located in the Project Area.

Local Cultural Resource Regulations and Plans

South Bayshore Plan

The South Bayshore Plan specifically mentions the South San Francisco Opera House as a cultural resource whose preservation is important to the South Bayshore area. The plan describes the building's significance:

The Bayview Opera House is uniquely situated to serve as a major activity center which preserves the working class heritage and brings together the diverse social and cultural elements that make up today's community.

San Francisco Planning Code

Article 10 of the *San Francisco Planning Code* provides for review of proposed alterations to listed historic resources by the Landmarks Preservation Advisory Board and the City Planning Commission. It permits the City to delay alteration or demolition of listed resources, but does not generally prohibit demolition. As noted above, Article 10 lists two locally designated San Francisco Landmarks within the Project Area's activity nodes. These are South San Francisco Opera House (Landmark No. 8, 1601, Newcomb Avenue) in the Town Center Activity Node, and the Hunters Point Springs and Albion Brewery (Landmark No. 60, 881 Innes Avenue) in the Hunters Point Shoreline Activity Node.

IMPACTS

SIGNIFICANCE CRITERIA

California Environmental Quality Act (CEQA) Section 21084.1 states that “a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” These changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

For the purposes of CEQA Guidelines Section 15064.5, the term “historical resources” shall include the following:

1. A resource listed in, or determined to be eligible for listing in, the CRHR. For purposes of this evaluation, any structure assigned a National Register status code of “3,” “4,” or “5” would be considered eligible for listing in the California Register.
2. A resource included in a local register of historical resources (such as Articles 10 and 11 of the *San Francisco Planning Code*), as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing in the CRHR (Public Resources Code Section 5024.1, Title 14 CCR, Section 4800.3) as follows:
 - is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - is associated with the lives of persons important in our past;
 - embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - has yielded, or may be likely to yield, information important in prehistory or history.

PROGRAM EFFECTS

The following sections describe impacts to prehistoric and historical archaeological deposits and potentially historic structures that would apply to the activity nodes, as well as the BIT and IBIP areas.

Prehistoric and Historic Archaeological Deposits

Documented prehistoric and historical archeological deposits are located within the Northern Gateway, Town Center, and South Basin Activity Nodes, although archaeological sites could be located throughout the Project Area, as described in Section III.J, Setting. The Project calls for development activities to occur on infill sites. Ground-disturbing activities in close proximity to these sites could damage or destroy archeological resources potentially eligible for inclusion in the CRHR. In addition, development in these areas would greatly increase the possibility of encountering other related and/or similar resources potentially eligible for inclusion in the CRHR. As a result, development on or near these locations could lead to potentially significant impacts to prehistoric and historic archaeological deposits (see **Mitigation Measure 12**).

Potentially Historic Structures

No historic structure have been identified within Candlestick Point Activity Node. Properties within the Northern Gateway Activity Node, Town Center Activity Node, Health Center Activity Node, Oakinba Activity Node, South Basin Activity Node, and Hunter's Point Shoreline Activity Node have been assigned a status code of "3," "4," or "5." (see Table B-1 in Appendix B).

The Project calls for a significant amount of new construction to occur on underutilized parcels and vacant infill opportunity sites within these activity nodes. Construction activities directed toward any of the properties assigned a status code of "3," "4," or "5" requiring demolition, relocation, or substantial alterations to the structure or its immediate surrounding, such that the structure's potential historic significance would be materially impaired, would be

a significant effect on the environment. This would be considered a potentially significant impact (see **Mitigation Measure 12**).

Sensitive Sites

Specific locations within the activity nodes are sensitive, and specific mitigation has been identified for these sites as follows.

Town Center Block: the City or the Agency shall implement Mitigation Measure 12.

South Basin: prior to any subsurface construction activities in the blocks enclosed by Carroll Avenue, Underwood Avenue, Hawes Street, and Ingalls Street, the City or the Agency shall implement Mitigation Measure 12.

Northern Gateway, Town Center, South Basin: future project proposals that would result in soils disturbing activities in the vicinity of the blocks around Third Street shall implement Mitigation Measure 12.

Hunters Point Shoreline, India Basin Industrial Park area: prior to any subsurface construction activities north of Hudson Avenue and east of Hunters Point Boulevard just south of the India Basin Shoreline Park, the City or the Agency shall implement Mitigation Measure 13.

Hunters Point Shoreline: prior to any subsurface construction activities on the Hunters Point Power Plant site; specifically, those areas north of the India Basin Shoreline Park and east of Hunters Point Boulevard on either side of the Evans Street alignment, the City or the Agency shall conduct archaeological monitoring to prevent potential damage to buried historic resources. In the event that intact marine resources or evidence of Chinese shrimp camps are encountered, construction shall be halted until the artifacts are evaluated for their historic significance under CEQA.

Hunters Point Shoreline: prior to subsurface construction activities along either side of the Griffith Street alignment between Innes and Hudson Avenue, the City or the Agency shall implement Mitigation Measure 12.

Since there is the potential that unanticipated archeological resources could be affected by the proposed activities, Mitigation Measure 14 shall be implemented for all construction projects.

Impacts Related to Other Programs

Affordable Housing Program

The Affordable Housing Program calls for new housing to be constructed on infill and other opportunity sites. Adverse impacts to prehistoric or historic archeological resources could occur. Previously unknown archaeological resources could be encountered anywhere during construction. Damage or destruction of legally-significant resources would be considered a potentially significant impact.

Construction activities from the Affordable Housing Program directed toward any of the properties assigned a status code of “3”, “4” or “5” (or locally designated landmarks) requiring demolition, relocation, or substantial alterations to the structure or its immediate surrounding, such that the structure’s historic significance would be materially impaired, would be a significant effect on the environment. (see **Mitigation Measure 15**).

Community Enhancements Program

The Project would establish a Community Enhancements Program to improve and enhance the community character by establishing design guidelines and streetscape plans, and funding these public improvement and enhancement programs. The Design Guidelines would guide the design and appearance of new construction, particularly mixed-use transit-oriented development along Third Street.

Streetscape Plans would be initiated for the three major roadways in the community, including: (1) Third Street; (2) the northern route to the Shipyard, along Evans and Innes Avenues; and (3) a new southern route into the Shipyard along Carroll Avenue and a proposed connection across Yosemite Slough. The Third Street Streetscape Plan would be developed to support and reinforce the Third Street LRT and the Bayview Connections Urban Open Space projects in the Town Center Activity Node. The Streetscape Plans would include landscaping,

street furniture, lighting, pedestrian islands, and other uniform features, and could also add parking on side streets to alleviate the parking loss related to the Third Street LRT project. A Green Streets Program would augment the Streetscape Plans by adding landscaping and lighting to local neighborhood streets, in concert with the Model Block Program.

A Façade Renewal Program would maintain and enhance the historic facades along the major roadways, and a Framework Open Space Program would guide the improvement, maintenance, and programming of publicly owned open space in the area, in concert with the Recreation and Park Department and other local and state agencies regarding other open space resources in the Bayview Hunters Point area. The Framework Open Space Program would provide a mechanism to manage the long-term maintenance, enhancement, and development of the community's open space and recreation system and would guide existing and new open spaces in the community, as well as potential open space resources at the Shipyard, on Port-owned land north of Cargo Way, and on state-owned lands around Yosemite Slough.

Impacts related to known prehistoric archeological resources could occur, but are not expected since the proposed activities would take place largely on shoreline areas that were filled during the twentieth century, and subsurface excavation would likely be shallow. However, there remains the possibility that buried or one time submerged prehistoric archeological resources could be affected by the Project.

The facade renewal program along Third Street could have significant adverse impacts on historic resources. Fifty-nine properties along Third Street have a National Register status code: one is rated “3” (appears eligible for listing in the National Register). Fifteen properties have a National Register status code of “4” (may be eligible for listing if certain conditions are met). Forty-three properties have a National Register status code of “5” indicating that these properties, although not eligible for listing in the National Register, may possess historic significance at the local level. Activities directed toward any of these properties that may cause a substantial adverse change in their significance, such as an alteration that would cause the properties’ significance to be materially impaired, would be considered a potentially significant impact (see **Mitigation Measure 16**)

Enhanced Truck Route Program

The Enhanced Truck Route Program calls for improvements within existing public rights-of-way including new bridges and roadway landscaping. Because these improvements would take place within existing rights-of-way, it is unlikely that intact archaeological deposits are present. Prehistoric archeological resources may be located in the vicinity of the proposed bridge at Fitch Street or Griffith Street. As discussed previously, the bridge would be constructed largely on twentieth-century fill with little or no chance of encountering intact and significant historic deposits. As a result, the Enhanced Truck Route Program would have no significant impact on archaeological resources.

With the exception of the circa 1938 Art Moderne-style bridge at Third Street and Islais Creek, no historic architectural resources have been identified within the public rights-of-way of the Project Area. As no modifications to this bridge are anticipated, the Enhanced Truck Route Program would have no significant impact on historic resources.

PROJECT EFFECTS

The Bayview Connections Urban Open Space project proposes to make pedestrian and streetscape improvements in the public rights-or-way in three locations: in Area No. 1 Mendell Street would become a pedestrian-only space, in Area No. 2, improvements to the Bayview Opera House Plaza would be made, and in Area No. 3 streetscape and intersection improvements would be made along Oakdale Avenue between Third and Phelps Streets (see Figure II-3). A second phase of the Bayview Connections Urban Open Space project may include reconfiguration of the open space area to accommodate a new public library. Given the disturbed nature of these public rights-of-way, it is unlikely that intact archaeological resources would be encountered during construction. Construction would likely occur at the street level, and would not entail a substantial amount of subsurface excavation. However, prehistoric deposits have been previously encountered in shallow right-of-way projects in the Bayview Hunters Point area. Thus, impacts to archaeological resources resulting from the Bayview Connections Urban Open Space project could occur and would be considered potentially significant (see **Mitigation Measure 12**). Potential impacts related to

improvements of the Opera House Plaza in the Town Center Block have been discussed previously in the Town Center Activity Node section.

The historic resources survey identified two resources along Oakdale Avenue with a National Register status code of "4," and 30 resources with a status code of "5." The proposed streetscape improvement plan would somewhat alter the setting of these resources, including making changes to the landscaping and sidewalk areas in front of these resources. These alterations would be considered aesthetically beneficial to the area and would have no significant impact on these resources such that they would materially alter those physical characteristics that define their historic significance. Changes to the plaza beside the Bayview Opera House would have minimal changes to the historic setting of this important historic resource, and would not constitute an adverse impact to the building. In addition, no historic architectural resources have been identified within the public rights-of-way of Bayview Connections Urban Open Space project area. Therefore, development activities associated with the Bayview Connections Urban Open Space project would have a less-than-significant impact on historic architectural resources.

NOTES - *Cultural Resources*

- ¹ David Chavez and Associates, 2001, *Archaeological Resources Investigations for the Bayview-Hunters Point Redevelopment Plan*. Updated 2004.
- ² Carey & Company, 2001, *Bayview Hunters Point Redevelopment Plan - Historic Resources Survey and Evaluation*. Prepared for EIP Associates, San Francisco, CA. Updated April 2004.
- ³ City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources, September 22, 2003.

K. HAZARDS AND HAZARDOUS MATERIALS

This section presents the existing setting and potential impacts related to hazards and hazardous materials associated with the implementation of the Project. The Setting includes a definition of hazardous materials and waste, an overview of the most relevant hazardous materials regulations that are applicable to the Project Area, a description of general environmental conditions in the Project Area with respect to the presence of hazardous materials and wastes, and a general description of hazardous building materials likely to be present within the Project Area. Based on this information, impacts associated with the potential to be exposed to hazardous materials during construction and as a result of future land use changes due to implementation of the Project are identified.

SETTING

Hazardous materials and hazardous wastes are defined in the CCR Title 22, Sections 66260 through 66261.10. As defined in Title 22, hazardous materials are grouped into four general categories: toxic (causes human health effects); ignitable (has the ability to burn); corrosive (causes severe burns or damages materials); or reactive (causes explosions or generates toxic gasses). Hazardous materials are generally considered to be substances with certain chemical or physical properties which may pose a substantial present or future hazard to human health or the environment when improperly handled, stored, disposed, or otherwise managed. In general, discarded, abandoned, or inherently waste-like hazardous materials are referred to as hazardous wastes. A hazardous material or waste can be present in a liquid, semi-solid, solid, or gaseous form.

This section describes general environmental conditions in terms of potential sources of hazardous materials in soil or groundwater in the Project Area. The discussion of environmental conditions is based primarily on information from two reports completed in 1998 as part of a Brownfields Pilot Project grant from the U.S. Environmental Protection Agency (EPA),^{1,2} and on the 2004 environmental database review which was completed to update the listing of potential sources of hazardous materials within the Project Area.³ The

environmental conditions documented in these reports provide a historical background and overview of the Project Area to assess general types of potential impacts and the likelihood of their occurrence.

On the basis of these reports, the following potential sources of hazardous materials are present in the Project Area:

- fill materials placed east of the historic high tide line;
- identified sites where soil or groundwater has been affected by a chemical release(s) from past or present land uses (referred to as “environmental cases”); and
- existing permitted uses of hazardous materials, including underground storage tanks (USTs) and permitted handling of hazardous wastes.

Information on fill history and historical land use was obtained from a review of historical fire insurance maps (Sanborn maps dating from 1886 to 1991) and historical aerial photographs (dating from 1935 to 1995). Information on the remaining potential sources of hazardous materials was obtained from a review of federal and state environmental databases. Some site-specific information was obtained from regulatory agency files for those sites identified in the environmental databases in 1998, but site specific conditions were not updated in 2004. Appendix C presents the name and date of each database reviewed in 2004.

OVERVIEW OF ENVIRONMENTAL CONDITIONS IN THE PROJECT AREA

Potential sources of hazardous materials within the Project Area that could affect soil or groundwater include fill materials, historic and current use of hazardous materials, and identified environmental cases. These sources are discussed in general below.

Fill Materials

Large areas of the bay shoreline in the Project Area historically consisted of marshland with tidal sloughs. Beginning in the 1850s, the shallow margins of the bay were filled to extend the shoreline, and the fill activities have altered the natural shoreline. The majority of the shoreline in the Project Area was filled between 1906 and 1940, with the Yosemite Slough

area and portions between Islais Creek and the Hunters Point Shipyard filled in the 1930s to 1950s. Some additional filling occurred through the late 1960s to create the current shoreline.

The fill materials were primarily obtained from dune sands, quarried rock, industrial refuse, and building debris following the 1906 earthquake (see Section III.L, Geology and Soils). The composition of the artificial fill is highly variable, ranging from cobble to boulder sized rubble mixed with sand and gravel. The larger sized material includes such items as concrete, bricks, porcelain, glass, and wood. Hazardous materials used in the industries that were destroyed during the 1906 fire and earthquake were commonly incorporated into the building debris, which was then incorporated into the earthquake fill, and built upon during reconstruction. Because of this historical practice, the 1906 earthquake fill commonly contains polynuclear aromatic hydrocarbons,⁴ heavy metals, oil and grease, and volatile organic compounds.⁵

The existence of hazardous materials in the earthquake fill is one of the reasons for enactment of Article 22A of the *San Francisco Health Code* (previously referred to as the Maher Ordinance), which is described below in Regulatory Framework. Article 22A requires site assessments at specified sites located eastward of the historic 1851 high tide line where the land has been filled, unless a waiver is granted by the Director of the San Francisco Department of Public Health (or the Director designee). Depending on the results of the site assessments, mitigation can be required to clean up hazardous materials identified in the soil. Portions of the Northern Gateway, South Basin, Hunters Point Shoreline, and Candlestick Point Activity Nodes, as well as the IBIP and BIT areas, are located eastward of the 1851 high tide line, and these areas would be subject to the requirements of Article 22A.

Historic Land Uses

The Project Area has a history of developed uses for over 100 years. Many of the historical uses at properties within the Project Area are associated with the presence of hazardous materials due to specific land use activities. Much of the northern portion of the Project Area, including the Oakinba and Northern Gateway Activity Nodes, as well as IBIP and BIT areas, has primarily been used for industrial purposes since the 1800s as described in the discussion of each activity node below. From the 1800s until the 1980s, these areas included larger

industries such as lumber, meat packing, tallow, tannery, and automotive repair companies, while more recently the area has shifted towards more commercial and smaller industries. The center portion of the Project Area has been predominantly residential since the early 1900s. The southern portion of the Project Area was primarily residential in the early 1900s and has gradually shifted towards a mix of small commercial, industrial, and, more recently, a return of residential uses. The southernmost part of the Project Area, including the area that is now in the Candlestick Point Activity Node, was open space until the late 1950s when it began serving as a recreational area.

Some specific historical land uses within the Project Area that may be associated with hazardous materials include power generation facilities, gasoline service stations, oil storage facilities, automotive shops, dry cleaning operations, tallow and tannery operations, and printing shops. These land uses are commonly associated with the use of petroleum products, metals, solvents, acids, caustics, and polychlorinated biphenyls (PCBs). In addition, lumber yards that were present are potential sources of creosote. The historic use of hazardous materials at these sites was generally not well regulated, and it is possible that releases of hazardous materials to the soil and/or groundwater could have occurred.

Current Land Uses

Hazardous materials are used at many locations throughout the Project Area, and in some cases, chemical releases have occurred that result in soil and/or groundwater contamination. Use of these materials is commonly associated with industrial and maritime uses in the northern and bayside areas of the Project Area, as well as industrial uses such as those in the central and southern portions of the Project Area. The descriptions below address current hazardous materials uses throughout the Project Area and known environmental cases where a chemical release has occurred.

Permitted Hazardous Materials Uses

Permitted uses of hazardous materials include those facilities that use hazardous materials or handle hazardous wastes in accordance with current hazardous materials and hazardous waste regulations. Because the use and handling of hazardous materials at permitted sites are subject

to strict regulation, the potential for a release of hazardous materials from these sites is considered low unless there is a documented chemical release at that same site. In such cases, the site would also be tracked in the environmental databases as an environmental case (described separately below). Permitted sites without documented releases are nevertheless potential sources of hazardous materials in the soil and/or groundwater (compared to sites where there are no hazardous materials) because of accidental spills, incidental leakage, or spillage that may have gone undetected.

Table III.K-1 summarizes the total number of permitted facilities within the Project Area identified in the record search for each regulatory database, summarized by activity node. Many of the facilities are permitted for more than one hazardous material use and appear in more than one database. After compiling the information from each database by address, a total of 426 distinct properties with permitted hazardous materials uses were identified. Appendix C includes a summary of each regulatory database reviewed and the date of the database as well as a compilation of permitted uses by address. These uses are discussed by activity node in the following sections.

As summarized in Table III.K-1, the primary permitted hazardous materials uses include 251 facilities with permitted or historic USTs identified in the Underground Storage Tank (UST) database, the Facility Inventory Database (FID UST) and the Hazardous Substances Storage Container Database (HIST UST). The database review also identified:

- Eight facilities that have registered aboveground petroleum storage tanks (AST);
- One facility that has reported releases of hazardous materials to the air, water, or land (TRIS)
- Sixty-one facilities that report air emissions to the local air board (EMISSIONS); and
- Three facilities that conduct dry cleaner-related operations (DRY CLEANERS).

III. Environmental Setting and Impacts
 K. Hazards and Hazardous Materials

TABLE III.K-1
SUMMARY OF PERMITTED FACILITIES USING HAZARDOUS MATERIALS BY ACTIVITY NODE

PERMITTED FACILITIES USING HAZARDOUS MATERIALS (number)							NAME AND DESCRIPTION OF REGULATORY DATABASE		
Northern Gateway	Town Center	Health Center	Oakinba	South Basin	Shoreline	Hunters Point	IBIP	BIT	
0	0	0	3	2	1	0	0	0	
16	2	5	26	33	7	0	9	3	
3	0	1	12	3	1	0	1	0	
21	1	11	58	36	3	0	9	3	
15	0	4	39	19	2	1	6	2	
1	0	0	0	2	2	1	1	0	
0	1	0	1	1	0	0	0	0	
0	0	0	0	0	1	0	0	0	
11	1	2	19	14	2	1	8	3	
41	7	13	96	86	14	2	30	7	
25	4	7	45	46	8	1	16	4	

Resource Conservation and Recovery Act Information System Large Quantity Generators (RCRIS LQG) – facilities permitted to generate more than 1,000 kilograms per month of non-acute hazardous waste.

RCRIS Small Quantity Generators (RCRIS SQG) – facilities permitted to generate more than 100 kilograms per month but less than 1,000 kilograms per month of non-acute hazardous waste.

Underground Storage Tanks (UST) – facilities permitted to maintain underground storage tanks.

Facility Inventory Database (CA FID UST) – facilities on a historical listing of active and inactive USTs.

Hazardous Substances Storage Container Database (HIST UST) – facilities on a historic list of UST sites.

Aboveground Petroleum Storage Tank Facilities (AST) – facilities with registered above ground storage tanks.

Dry cleaner related facilities (DRYCLEANERS)

Toxic Chemical Release System (TRIS) – facilities that report releases of chemicals to the air, water, or land as required by Title III of the Superfund Amendments and Reauthorization Act of 1986.

Toxic and criteria pollutant emissions data (EMISSIONS) – sites that have reported air emissions to the local air board.

Hazardous Waste Information System (HAZNET) – facilities that have filed hazardous waste manifests with the DTSC.

Facility Index System (FINDS) – a database that includes information on facilities included in other more detailed databases.

Source: Orion Environmental Associates and Environmental Data Resources 2004.

Notes:

* Some facilities appear on more than one list.

Permitted uses associated with handling of hazardous wastes includes six large and 101 small quantity generators (RCRA LQG and RCRA SQG), permitted under the federal Resource Conservation and Recovery Act (RCRA), and 296 facilities that have submitted hazardous waste manifests to the California Department of Toxic Substances Control (DTSC) (HAZNET). The Facility Index System (FINDS), which is a database that includes information on facilities included in other more detailed databases, identifies 156 facilities for which additional hazardous waste information is provided on other databases.

Environmental Cases and Spill Sites

Environmental cases are those sites that are suspected of releasing hazardous materials or have had cause for hazardous materials investigations and are identified on regulatory agency lists. Identification of hazardous materials in the soil or groundwater at these sites is generally due to site disturbance activities, such as removal or repair of a UST, a spill of hazardous materials, or excavation for construction. The status of each environmental case varies and can be either active (ongoing investigations or remediation), closed (remediation or cleanup completed and approved by the regulatory agency), or unknown. However, the status of each case can change with time, and new cases are periodically added to the databases.

Table III.K-2 lists by activity node the number of environmental cases within the Project Area identified by the regulatory database review. Many sites appear in more than one database. After compiling the information from each database by address, a total of 160 distinct properties were identified as environmental cases, 37 were identified as spill sites, and 10 were identified for no further action or referred to another agency. Appendix C includes a summary of each regulatory database reviewed and the date of the database as well as a compilation of environmental cases by address.

As summarized in Table III.K-2, the primary environmental cases identified within the Project Area include 123 sites with leaking underground storage tanks (LUST) which would generally involve a release of petroleum products. The database review also identified:

III. Environmental Setting and Impacts
K. Hazards and Hazardous Materials

TABLE III.K-2
SUMMARY OF ENVIRONMENTAL CASES
AND SPILL SITES BY ACTIVITY NODE

ENVIRONMENTAL CASES IDENTIFIED ON REGULATORY DATABASE (number)

Northern Gateway	Town Center	Health Center	Oakinba	South Basin			Shoreline	Candle Stick Point	IBIP	BIT	NAME AND DESCRIPTION OF REGULATORY DATABASE ENVIRONMENTAL CASES
				Hunters	Point	Shoreline					
0	0	0	2	2	1	1	0	0	0	0	Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing (CA SLIC) - sites under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.
0	0	0	0	1	0	0	0	0	0	0	California Bond Expenditure Plan (BEP) - sites with a site-specific expenditure plan for the appropriation of state funds.
0	0	0	0	0	1	0	1	0	1	0	Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) of potential Superfund sites. These are generally sites with documented releases of hazardous materials.
0	0	0	0	1	0	0	0	0	0	0	RCRA Administrative Action Tracking System (RAATS) - enforcement actions taken under RCRA pertaining to major violations.
0	0	0	0	1	0	1	0	0	0	0	Low threat sites that have entered voluntary cleanup agreements with the DSTC (VCP).
0	0	0	0	1	0	0	0	0	0	0	List of Deed Restrictions (DEED) - sites which have been issued a deed restriction because of the presence of hazardous materials.
0	0	0	0	2	2	0	0	0	0	0	Proposition 65 Records (NOTIFY 65) - facilities that have reported a release that could threaten a drinking water source.
0	0	0	0	0	0	1	1	0	0	0	Waste Management Unit Discharge System (WMUDS/SWAT) - waste management units.
1	0	0	0	1	4	1	2	0	0	0	Solid Waste Information System (SWIFL) -active, inactive or closed solid waste disposal sites.
2	0	0	1	0	1	1	1	1	1	1	Waste Discharge System (WDS) - sites which have been issued waste discharge requirements.

TABLE III.K-2 (CONTINUED)
SUMMARY OF ENVIRONMENTAL CASES
AND SPILL SITES BY ACTIVITY NODE

ENVIRONMENTAL CASES IDENTIFIED ON REGULATORY DATABASE (number)							NAME AND DESCRIPTION OF REGULATORY DATABASE		
Northern Gateway	Town Center	Health Center	Okinba	South Basin	Hunters Point Shoreline	Candle Stick Point	IBIP	BIT	
0	0	0	2	1	0	0	0	0	
1	1	0	0	2	0	0	0	0	
17	1	7	52	31	4	0	6	5	
17	1	8	49	32	4	1	6	3	
Leaking Underground Storage Tanks (LUST). Cortes Hazardous Waste and Substances Site List (CORTES) – a compilation of sites listed in the LUST, SWFLF, and CAL-SITES databases.							SITES DESIGNATED FOR NO FURTHER ACTION OR REFERRED TO ANOTHER AGENCY		
1	0	0	4	2	0	0	0	0	
0	1	0	0	1	0	0	0	0	
0	0	0	0	2	0	0	0	0	
4	2	2	3	6	2	0	1	1	
REPORTED SPILLS Emergency Response Notification System (ERNS). These cases are usually spills or releases of chemicals reported to federal authorities.							REGULATORY SPILLS		
Cal Sites (CAL-SITES) – potential hazardous waste sites identified by the DTSC. Federal Insecticide, Fungicide, and Rodenticide Act/TSCA (FTTS) – administrative, enforcement, and compliance actions related to the Federal Insecticide, Fungicide, and Rodenticide Act.							REGULATORY SPILLS		
CERCLIS No Further Action Planned (CERCLIS NFRAP) – sites previously identified under CERCLIS but designated for no further action. No further action determination (NFA) – sites where the DTSC has made a clear determination that the property does not pose a threat to human health or the environment. Unconfirmed properties referred to another agency (REF) – sites that do not require oversight by the DTSC and have been referred to another agency.							REGULATORY SPILLS		

TABLE III.K-2 (CONTINUED)
SUMMARY OF ENVIRONMENTAL CASES
AND SPILL SITES BY ACTIVITY NODE

ENVIRONMENTAL CASES IDENTIFIED ON REGULATORY DATABASE (number)

Northern Gateway	Town Center	Health Center	Oakinba	South Basin			Candle Point Stick Point Shoreline	IBIP	BIT	NAME AND DESCRIPTION OF REGULATORY DATABASE
				Hunters	Point	Shoreline				
3	2	1	4	5	2	1	1	1	1	California Hazardous Materials Incident Reporting System (CHMIRS) - hazardous materials spills and releases reported to the California Office of Emergency Services
0	0	0	3	1	0	0	0	0	0	Hazardous Materials Incident Reporting System (HMIRS) - hazardous materials spills and releases reported to the U.S. Department of Transportation.

Source: Orion Environmental Associates and Environmental Data Resources, 2004.

Note:

Some cases may appear on more than one list.

- Seven sites under the jurisdiction of the Regional Water Quality Control Board (RWQCB) (CA SLIC),
- One site identified under the California Bond Expenditure Plan,
- Two potential Superfund sites (CERCLIS),
- One enforcement action taken under RCRA (RAATS)
- Two sites that have entered a voluntary cleanup agreement with the (VCP)
- One site with a deed restriction (DEED),
- Four facilities that have reported a release that could threaten a drinking water source (NOTIFY 65),
- Two waste management units (WMUDS/SWAT),
- Nine active, inactive or closed solid waste disposal sites (SWFLF),
- Seven sites that have been issued waste discharge requirements (WDS),
- Three potential hazardous waste sites identified by the DTSC (CALSITES), and
- Four administrative, enforcement, or compliance actions related to the Federal Insecticide, Fungicide, and Rodenticide Act (FTTS).

The CORTESE database lists sites that are included in other databases including LUST, SWFLF, and CAL-SITES; 121 sites were identified in this database. Of those sites identified for no further action or referred to another agency, seven were identified for no further action under CERCLA (CERCLIS NFRAP); two were identified for no further action by the DTSC (NFA); and two were referred to another agency by the DTSC (REF). Although these sites may have been designated for no further action by one agency, several are undergoing site investigation/remediation activities under the oversight of another agency. Of the spill sites identified within the Project Area, 21 were reported to federal authorities (ERNS); 20 were reported to the California Office of Emergency Services (CHMIRS); and four were reported to the U.S. Department of Transportation (HMIRS).

Adjacent Land Uses

Located outside of and directly adjacent to the Project Area on the southeast side, the Hunters Point Shipyard is a documented environmental case.⁶ It was placed on the National Priorities List (NPL), otherwise known as Superfund, in 1989. The site has been the location of

industrial uses since 1869 and was operated as a U.S. Navy military installation from 1940 until 1976. After the Navy operations ended at the site, the site was leased to tenants that were known to have used a variety of hazardous materials and generated hazardous wastes. Groundwater, sediments, soil, and surface water are contaminated with fuels, pesticides, heavy metals, PCBs, and volatile organic compounds. In addition, the site's soil contains naturally occurring asbestos. The site also includes a landfill that contains radium dials. Remediation of the site is currently in process in accordance with the 1992 Federal Facility Agreement between the U.S. Navy, the EPA, and the State of California, which provides for a coordinated approach to the environmental investigation and cleanup in compliance with federal, state, and local requirements and specifies a schedule for implementation of remedial activities.

The shipyard has been divided into six parcels to facilitate investigation and cleanup, and ultimately transfer to the City for reuse. One parcel of this closed military base is undergoing transfer to the City for residential, commercial, and recreational uses. Selection of a remedial action for each parcel is scheduled by 2006 and transfer to the City will occur after the selected cleanup has been completed.

OVERVIEW OF ENVIRONMENTAL CONDITIONS IN ACTIVITY NODES

The following sections describe the known environmental conditions related to hazardous materials within each activity node. The total number of sites described under each activity node refers to the number of individual sites identified, based on street address. The number of sites identified in each database has not been adjusted for address, and the total may be more than the total number of sites in the activity node because many sites are included in more than one environmental database. Specific sites identified and the databases in which each was identified are included in Appendix C.

Northern Gateway Activity Node

The northeastern portion of the Northern Gateway Activity Node is east of the 1851 fill line and is subject to the requirements of Article 22A. The remainder of this activity node is west of the fill line. The historical land uses in this activity node were primarily industrial,

including tallow, automotive, warehouse, printing, lumber, oil storage, meat packing, and tannery facilities.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include 16 RCRA small quantity generators; three sites with permitted underground USTs; 36 sites with historic USTs; one site with registered ASTs; 11 sites that have reported air emissions to the local air board; and 41 sites that have submitted hazardous waste manifests to the DTSC. Twenty-five sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one solid waste landfill; two sites with waste discharge requirements; one site undergoing an administrative, enforcement, or compliance action related to the Federal Insecticide, Fungicide, and Rodenticide Act; and 17 LUST sites. Seventeen sites were also identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are a total of seven reported spill sites within this activity node and one site that has been recommended for no further action by the EPA.

Town Center Activity Node

The entire Town Center Activity Node is west of the 1851 fill line and is not subject to Article 22A. The historical land uses in this activity node were primarily residential, with some recreational, commercial, and industrial land uses that may have involved the use of hazardous materials include lumber, automotive, and dry cleaning facilities.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include two RCRA small quantity generators; one site with historic USTs; one dry cleaning facility; one site that has reported air emissions to the local air board; and seven sites that have submitted hazardous waste manifests to the DTSC. Four sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one site undergoing an administrative, enforcement, or compliance action related to the Federal Insecticide, Fungicide, and Rodenticide Act; one LUST site; and one site identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are a total of four reported spill sites within this activity node and one site that has been recommended for no further action by the DTSC.

Health Center Activity Node

The entire Health Center Activity Node is west of the 1851 high tide line and is not subject to the requirements of Article 22A. The historical land uses in this activity node included residential, mixed use, industrial, commercial, and recreational. Uses that may have involved the use of hazardous materials include automotive, warehouse, printing, power, and dry cleaning facilities.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include five RCRA permitted small quantity generators; one site with permitted USTs; 15 sites with historic USTs; two sites that have reported air emissions; and 13 sites that have filed hazardous waste manifests with the DTSC. Seven sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include seven leaking underground storage tank sites. An additional eight sites were identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are three reported spill sites within this activity node and no sites that have been recommended for no further action or referred to another agency.

Oakinba Activity Node

The entire Oakinba Activity Node is west of the 1851 high tide line and is not subject to the requirements of Article 22A. While early historical land uses in some portions of this activity node were primarily residential, other portions have an extensive history of mixed,

commercial, and industrial land uses. Uses that may have involved hazardous materials include tannery, lumber, warehouse, automotive, oil storage, coal gas, treatment facilities, construction, tallow, military, corporation yards, chemical, medical laboratory, disposal, rail yard, fire, and power.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include 3 RCRA large quantity generators; 26 RCRA small quantity generators; 12 sites with permitted underground USTs; 97 sites with historic USTs; two sites with registered ASTs; one dry cleaning facility; 19 sites that have reported air emissions to the local air board; and 96 sites that have submitted hazardous waste manifests to the DTSC. Forty-five sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include two cases under the jurisdiction of the RWQCB; one site undergoing an enforcement action under RCRA; one site that has entered a voluntary cleanup agreement with the DTSC; one site that has been issued a deed restriction; two sites that have reported a release that could threaten a drinking water supply; one solid waste landfill; one site with waste discharge requirements; two potential hazardous waste sites identified by the DTSC; and 52 LUST sites. Forty-nine sites were also identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are a total of ten reported spill sites within this activity node and four sites that have been recommended for no further action by the EPA.

South Basin Activity Node

Much of the southeast portion of the South Basin Activity Node is east of the 1851 fill line and would be subject to the requirements of Article 22A. The remainder of this activity node is west of the fill line. Historical land uses in this activity node were primarily mixed uses including industrial. Uses that may have involved hazardous materials include automotive, chemical, tallow, lumber, warehouse, recreation, dry cleaning, construction, and tannery facilities.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include two RCRA large quantity generators; 33 RCRA small quantity generators; three sites with permitted underground USTs; 55 sites with historic USTs; two sites with registered ASTs; one dry cleaning facility; 14 sites that have reported air emissions to the local air board; and 86 sites that have submitted hazardous waste manifests to the DTSC. Forty-six sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include two cases under the jurisdiction of the RWQCB; one site with a site-specific expenditure plan for the appropriation of state funds; two sites that have reported a release that could threaten a drinking water supply; four solid waste landfills; one potential hazardous waste site identified by the DTSC; two sites undergoing an administrative, enforcement, or compliance action related to the Federal Insecticide, Fungicide, and Rodenticide Act; and 31 LUST sites. Thirty-two sites were also identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are a total of 12 reported spill sites within this activity node and five sites that have been recommended for no further action or referred to another agency.

Hunters Point Shoreline Activity Node

The Hunters Point Shoreline Activity Node was filled from sometime prior to 1935, and fill activities were completed by 1975; the eastern portion of the activity node is east of the 1851 fill line and is subject to the requirements of Article 22A. The remainder of the activity node is west of the fill line. The historical land uses in this activity node were primarily industrial with some residential and recreational uses. Uses that may have involved hazardous materials include the Hunters Point Power Plant and boatyard, warehouse, and treatment facilities.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include one RCRA large quantity generator; seven RCRA small quantity generators; one site with permitted underground USTs; five sites with historic USTs; one site with registered ASTs; one site that

reported air emissions as required by Title III of the Superfund Amendments and Reauthorization Act of 1986; two sites that report air emissions to the local air board; and 14 sites that have submitted hazardous waste manifests to the DTSC. Eight sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one case under the jurisdiction of the RWQCB; one CERCLIS site; one site that has entered a voluntary cleanup agreement with the DTSC; one waste management unit; one solid waste landfill; one site with waste discharge requirements; and four LUST sites. Four sites were also identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are a total of four reported spill sites within this activity node, and no sites that have been recommended for no further action or referred to another agency.

Candlestick Point Activity Node

The Candlestick Point Activity Node was filled prior to 1969. The eastern portion of this activity node is east of the 1851 fill line and is subject to the requirements of Article 22A. The remainder of this activity node is west of the fill line.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within this activity node are summarized in Table III.K-1 and include one site with historic USTs; one site with registered ASTs; one site with reported air emissions; and two sites that have submitted hazardous waste manifests to the DTSC. One site was identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one case under the jurisdiction of the RWQCB; one waste management unit; two solid waste landfills; and one site with waste discharge requirements. One site was also identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There is one reported spill site within this activity node and no sites that have been recommended for no further action or referred to another agency.

India Basin Industrial Park

The entire IBIP is east of the 1851 fill line and is subject to the requirements of Article 22A. The historical land uses in the IBIP included a combination of uses characterized by severe conditions of blight, including light industrial, commercial centers, and residential uses.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within the IBIP are summarized in Table III.K-1 and include nine RCRA permitted small quantity generators; one site with permitted USTs; 15 sites with historic USTs; one site with registered ASTs; eight sites that have reported air emissions; and 30 sites that have filed hazardous waste manifests with the DTSC. Sixteen sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one CERCLIS site; one site with waste discharge requirements; and six leaking underground storage tank sites. An additional six sites were identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are also two reported spill sites. No sites that have been recommended for further action or referred to another agency.

Bayview Industrial Triangle

The northeastern portion of the BIT is east of the 1851 fill line and is subject to the requirements of Article 22A. The historical land uses in the BIT are predominately industrial, with activities that include light and heavy manufacturing, warehousing, and processing. A few residences are also located in the area, along with a number of vacant parcels. The easterly border of the BIT along Third Street includes commercial uses.

Based on the 2004 environmental database review, individual permitted hazardous materials uses within the BIT are summarized in Table III.K-1 and include three RCRA permitted small quantity generators; five sites with historic USTs; three sites that have reported air emissions; and seven sites that have filed hazardous waste manifests with the DTSC. Four sites were identified in the FINDS database, which is a compilation of sites identified in other databases.

Individual environmental cases and spill sites are summarized in Table III.K-2 and include one site with waste discharge requirements and five leaking underground storage tank sites. An additional three sites were identified in the CORTESE database, which is a compilation of sites included in other more detailed databases. There are also two reported spill sites. No sites that have been recommended for further action or referred to another agency.

HAZARDOUS BUILDING MATERIALS

Hazardous building materials are included in this discussion because future development may involve demolition or renovation of existing structures that may contain hazardous building materials. Some building materials commonly used in older buildings could present a public health risk if disturbed during an accident or during demolition or renovation of an existing building. Hazardous building materials include asbestos, electrical equipment such as transformers and fluorescent light ballasts that contain PCBs, fluorescent lights containing mercury vapors, and lead-based paints. Asbestos and lead-based paint may also present a health risk to existing building occupants if they are in a deteriorated condition. If removed during demolition of a building, these materials would also require special disposal procedures.

Until the 1970s, asbestos was commonly used as a building material, including use as insulation materials, shingles and siding, roofing felt, floor tiles, brake linings, and acoustical ceiling material. Asbestos is a known carcinogen and presents a public health hazard if it is present in friable (easily crumbled) form.

PCBs were commonly manufactured and used in the United States between 1929 and 1977 for uses such as electrical transformers and capacitors and fluorescent light ballasts. They are highly toxic substances that remain persistent in the environment, accumulate in biological systems, interfere with the reproductive system, and act as an immuno-suppressant. Under the Toxic Substance Control Act, Congress began regulating the use and manufacturing of PCBs since 1978, although PCBs continue to be used under strict regulations. Due to the historical land uses in the Project Area, there is a public health concern associated with historical uses of PCBs and the potential for leaks to have occurred.

Most fluorescent light ballasts manufactured prior to 1978 contain approximately 0.5 ounces of PCBs in a small capacitor; although, the quantity can be up to 2 ounces. In 1978, the EPA estimated that there were approximately 850 million of these capacitors in use in the United States. Disposal of more than 1 pound of PCBs, or approximately 16 capacitors, to a landfill would require notification of the EPA under CERCLA. Ballasts manufactured after January 1, 1978, do not contain PCBs and should be labeled as such on the ballast.

Spent fluorescent light tubes commonly contain mercury vapors at levels high enough to be considered a hazardous waste under California law; depending on the levels of mercury present, the light tubes may also be classified as hazardous under federal law.

Lead-based paint was commonly used prior to 1960 and is likely present in buildings constructed prior to 1960. Lead is toxic to humans, particularly young children, and can cause a range of human health effects depending on the level of exposure. When adhered to the surface of the material it is painted to, lead-based paint poses little health risk. Where the paint is delaminated or chipping, the paint can cause a potential threat to the health of young children or other building occupants who may ingest the paint. Lead dust could also present public health risks during demolition of a structure with lead-based paint. Lead-based paint that has separated from a structure may also contaminate nearby soil.

REGULATORY FRAMEWORK

Hazardous materials and hazardous wastes are subject to numerous federal, state, and local laws and regulations intended to protect health and safety and the environment. Many of these regulations would apply to future redevelopment activities within the Project Area. The overall regulatory framework for hazardous materials is discussed in Appendix C.

Properties with abandoned, idled, or underused industrial and commercial facilities are referred to as brownfields, where redevelopment or expansion is complicated by suspected or identified past pollution.. Historically, development of these sites has not been favored because of the unknown costs associated with cleanup of existing contamination and because of the potential for assuming the long-term liability associated with contamination at a property. Faced with these unknowns, developers have often preferred development of greenfields⁷ in

outlying areas where there are no contamination concerns but where there is generally a greater overall burden on the environment. However, to help address development in brownfields, the DTSC has developed a number of administrative and legislative tools within the brownfields program (also called “Brownfield Initiatives”) to reduce or eliminate barriers to development of these properties.

The sections below focus on those regulatory and policy-based initiatives that have been developed to promote reuse of brownfields by facilitating cleanup of abandoned, idled, and underutilized properties such as those that would be encountered within the Project Area. Local regulations that have been enacted to address the potential to encounter hazardous materials in the soil at development sites and the safe handling of hazardous materials (including hazardous wastes) are also discussed, followed by a discussion of local regulations related the control of lead-based paint during abatement activities and regulations enacted by the California Air Resources Board related to naturally occurring asbestos in soil and rock during construction activities.

Federal Brownfields Regulations and Policies

The EPA has developed numerous brownfields programs to promote and expedite the cleanup of brownfields while reducing the potential liability to lenders and developers of contaminated properties. These programs are more fully described in Appendix C.

State of California Brownfields Regulations and Policies

The DTSC has also developed brownfields programs to promote and expedite the cleanup of brownfields. A description of many of these programs is included in Appendix C. Those state programs developed with or in association with the DTSC most applicable to the Project Area are further described below.

Polanco Redevelopment Act

The Polanco Redevelopment Act, applicable only in redevelopment areas, authorizes a redevelopment agency to take action to require the investigation and cleanup of an identified

release of hazardous materials in accordance with applicable state and federal laws. Redevelopment agencies may also perform the cleanup themselves with the oversight of the DTSC, the RWQCB or local agency if the site owner or operator refuses to do so. If the cleanup is completed in accordance with an approved cleanup plan and is performed to the satisfaction of the responsible agency, redevelopment agencies, developers, subsequent land owners, and lenders receive immunity from liability for the contamination under this legislation. This act also includes cost recovery provisions to allow redevelopment agencies to pursue cost reimbursement from the responsible party for actions taken by the agency. Senate Bill 1684, passed in September 2002, was enacted to make this act permanent; the act is found in the California Health and Safety Code Section 33459 *et seq.*

The DTSC and the California Redevelopment Association have jointly developed an Environmental Oversight Agreement to facilitate the environmental assessment, cleanup, and reuse of brownfields sites by redevelopment agencies throughout California. The agreement can be used to structure technical consultation services on individual properties or groups of properties where the involved redevelopment agency wants the professional advice or counsel of the DTSC in evaluating site cleanup issues and potential future regulatory review processing steps. It can also be used to obtain DTSC regulatory oversight services through the site characterization, remedy selection, and cleanup process, leading to a closure letter for the site. The agreement establishes a collaborative process between the DTSC and redevelopment agencies while ensuring that cleanup efforts are protective of human health and the environment and thereby facilitates cleanup of brownfields sites.

Examples of where redevelopment agencies have used the Polanco Redevelopment Act to expedite the cleanup of brownfields sites include the Centre City Marina Project Area in San Diego, a 12-acre industrial site in Emeryville, a former 3-acre trucking and fuel distribution facility in San Leandro, and a former gas station and asphalt manufacturing facility site in Redwood City.⁸ Advantages of invoking the Polanco Act for these cleanups include speeding up the cleanup process, immunity from liability to facilitate financing for the development projects, and shifting the cleanup costs to the responsible parties.

California Land Environmental Restoration and Reuse Act

The California Land Environmental Restoration and Reuse Act (CLERRA) was enacted on October 12, 2001, to promote the restoration and reuse of brownfields sites in California. This act authorizes local regulatory agencies to require property owners to provide information related to potential past or present hazardous material releases at a property and to require a Phase I environmental site assessment if a release is indicated. In the event that a potential release is indicated by the Phase I environmental site assessment, the act requires the California EPA to assign the DTSC, RWQCB, or a local agency as the lead oversight regulatory agency for further investigation and remediation of the site. These actions include a preliminary endangerment assessment, additional site investigations, and implementation of remedial action in accordance with an approved Remedial Action Plan (RAP). To be eligible to require actions under this Act, the City of San Francisco would need to pass an implementing ordinance in accordance with the requirements of the CLERRA, designating a local agency to administer the act.

State Regulations Related to Naturally Occurring Asbestos

The CARB adopted the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, which became effective in the BAAQMD on November 19, 2002.⁹ The ATCM protects public health and the environment by requiring the use of best available dust mitigation measures to prevent off-site migration of asbestos-containing dust from road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas of ultramafic rock,¹⁰ serpentine,¹¹ or asbestos.¹² The BAAQMD implements the regulation.

For construction activities disturbing less than 1-acre of rock containing naturally occurring asbestos, the following specific dust mitigation measures must be implemented in accordance with the asbestos ATCM before construction begins and each measure must be maintained throughout the duration of the construction project:

- Limit construction vehicle speed at the work site to 15 miles per hour;

- Sufficiently wet all ground surfaces prior to disturbance to prevent visible dust emissions from crossing the property line;
- Keep all graded and excavated areas adequately wetted during construction to prevent visible dust emissions from crossing the property line;
- Adequately wet all storage piles, treat with chemical dust suppressants, or cover piles when material is not being added to or removed from the pile;
- Wash down all equipment before moving from the property onto a paved public road; and
- Clean all visible track out from the paved public road by street sweeping or a HEPA filter equipped vacuum device within 24 hours.

For construction activities disturbing greater than 1-acre of rock containing naturally occurring asbestos, construction contractors are required to prepare an asbestos dust mitigation plan specifying measures that will be taken to ensure that no visible dust crosses the property boundary during construction. The plan must specify the following measures:

- Prevent and control visible track out from the property;
- Ensure adequate wetting or covering of active storage piles;
- Control disturbed surface areas and storage piles that will remain inactive for seven days;
- Control traffic on on-site unpaved roads, parking lots, and staging areas – including a maximum vehicle speed of 15 miles per hour or less;
- Control earth moving activities;
- Control dust emissions from off-site transport of naturally occurring asbestos containing materials; and
- Stabilize disturbed areas following construction.

The asbestos dust mitigation plan must be submitted to and approved by the BAAQMD prior to the beginning of construction, and the site operator must ensure the implementation of all specified dust mitigation measures throughout the construction project. In addition, the BAAQMD may require air monitoring to monitor for off site migration of asbestos dust during construction activities and may change the plan on the basis of the air monitoring results.

As discussed in Section III.L, Geology and Soils, the upland areas of the Northern Gateway and Hunters Point Shoreline Activity Nodes have surface outcroppings of serpentine, a rock

type which contains naturally occurring asbestos. In addition, asbestos may be present in filled areas if fill materials were obtained from serpentinite outcrops. The ATCM applies to redevelopment projects that would involve the excavation of bedrock or fill materials containing naturally occurring asbestos.

City of San Francisco Hazardous Materials Regulations

Four regulations from the *San Francisco Health Code*, summarized below, are relevant to development within the Project Area with respect to hazardous materials and hazardous waste. These include Article 22A (Analyzing the Soil for Hazardous Waste, formerly the Maher Ordinance), Article 21 (Hazardous Materials), Article 21A (Risk Management Program), and Article 22 (Hazardous Waste Management). Article 34, Section 3407 of the *San Francisco Building Code* specifies procedures for the safe implementation of lead-based paint abatement activities in San Francisco. These codes incorporate, by reference, the California Health and Safety Code, the California Hazardous Waste Control Act, the Uniform Building Code, and the California Building Code, and in some cases, provide for additional stricter local requirements.

Article 22 A – Analyzing the Soil for Hazardous Waste

Construction in those portions of the Project Area located bayward of the historic high tide line that would involve excavation of greater than 50 cubic yards of soil would be subject to the requirements of Article 22A of the *San Francisco Health Code*. The requirements would be triggered by the building permit application or equivalent process for City or County projects.¹³ Major requirements include:

- Preparation of a site history report to describe past site uses and identify whether the site is listed as a hazardous waste site pursuant to state or federal regulations;
- Implementation of a soil investigation to evaluate the potential presence of hazardous wastes in the soil;
- Preparation of a soil analysis report that evaluates the results of chemical analysis of the soil samples;
- Preparation of a site mitigation report if contamination is identified, assessing potential environmental and health and safety risks, recommending measures to mitigate the

risks, identifying appropriate waste disposal and handling requirements, and presenting criteria for on-site reuse of soil;

- Preparation of a certification report stating that either (1) no hazardous wastes present in the soil present an unacceptable risk and that no mitigation measures are required; or (2) all mitigation measures recommended in the site mitigation report have been completed and that completion of the mitigation measures has been verified through follow-up soil sampling and analysis, if required.

Article 22A requires that the report(s) are prepared by knowledgeable, certified professionals and provide information on historic and current hazardous waste contamination at the property. The soil analysis report is submitted to the San Francisco Department of Public Health (SFDPH), DTSC and the RWQCB. If required on the basis of the soil analysis report, the site mitigation plan must (1) assess potential environmental and health and safety risks; (2) recommend cleanup levels and mitigation measures, if any are necessary, that would be protective of workers and visitors to the property; (3) recommend measures to mitigate the risks identified; (4) identify appropriate waste disposal and handling requirements; and (5) present criteria for on-site reuse of soil. The recommended measures would be completed during construction, and a certification report would be required upon completion stating that all mitigation measures recommended in the site mitigation report have been completed and that completion of the mitigation measures has been verified through follow-up soil sampling and analysis, if required.

If the soil sampling report does not indicate a potential risk to future site visitors and workers, then no mitigation will be required and the certification report will state that hazardous materials present in the soil do not present an unacceptable risk and that no mitigation measures are required. If the approved site mitigation plan includes leaving hazardous materials in the soil or groundwater with containment measures to prevent exposure to hazardous materials, the SFDPH would require a Risk Management Plan, Health and Safety Plan, and possibly a Cap Maintenance Plan specifying procedures for preventing unsafe exposure to hazardous materials left in place and safe procedures for handling hazardous materials should site disturbance be required. The SFDPH would require a deed notice, and the requirements of these plans would transfer to the new property owners in the event that the property is sold.

Article 22A protects the health and safety of the City's workers, residents, and occupants from risks associated with hazardous wastes in the soil by requiring a site assessment and mitigation of any risks identified as a condition for construction of a planned project. As stated previously, portions of the Candlestick Point, South Basin, Hunters Point Shoreline, and Northern Gateway Activity Nodes, as well as the IBIP and portions of the BIT area, are located bayward of the historic high tide line, and construction projects in these portions would be subject to the requirements of Article 22A if more than 50 cubic yards of soil would be disturbed during construction.

Article 21 – Hazardous Materials

Article 21 of the *San Francisco Health Code* provides for safe handling of hazardous materials in the City. In accordance with this article, any person or business that handles, sells, stores, or otherwise uses hazardous materials in quantities exceeding specified threshold amounts would be required to obtain and keep a current hazardous materials certificate of registration and to implement a hazardous materials business plan (HMBP) submitted with the registration application. Facilities with USTs are also required to obtain a permit to operate the tank. In addition to specifying permitting requirements for hazardous materials and USTs, Article 21 prohibits unauthorized releases of hazardous materials and specifies requirements for reporting an unauthorized release, inspections after an unauthorized release, addressing abandoned USTs or hazardous materials handling facilities, and closure of hazardous materials handling facilities.

This Article helps protect the health and safety of the general community and emergency response personnel, such as fire fighters and paramedics. Data on hazardous materials use are stored in a citywide computer system and can be made available to emergency responders. The information assists emergency responders to assess and resolve hazardous materials incidents quickly and safely. Inspections are performed by the City every one to two years or upon complaint.

This Article incorporates the California Underground Storage Tank Regulations specified in the California Health and Safety Code, Chapters 6.7 and 6.75; Hazardous Materials Release

Response Plans and Inventory Regulations requiring preparation of an HMBP, and specified in the California Health and Safety Code, Chapter 6.95, Article 1; Aboveground Petroleum Storage Tank Regulations requiring preparation of a SPCC plan, and specified in the California Health and Safety Code, Section 25270.5; and hazardous materials management provisions of the Uniform Fire Code requiring Hazardous Materials Inventories specified in Sections 8001.3.2(a) and 8001.3.3(a). It also provides for additional stricter local requirements.

Article 21A – Risk Management Program

Article 21A of the *San Francisco Health Code* provides for safe handling of regulated substances in the City.¹⁴ In accordance with this Article, any business that handles, sells, stores, or otherwise uses regulated substances in quantities exceeding specified threshold amounts, is required to register with the SFDPH and prepare a Risk Management Plan (RMP), formerly known as a Risk Management and Prevention Program. This article incorporates the requirements of the California Accidental Release Program specified in the California Health and Safety Code, Chapter 6.95, Article 2.

This Article helps protect the health and safety of the general community as well as the health and safety of emergency response personnel, such as fire fighters and paramedics, by requiring an RMP, prepared interactively with the SFDPH, that includes a hazard assessment to evaluate the potential effects of an accidental release, a program for preventing an accidental release, and a program for responding to an accidental release.

Article 22 - Hazardous Waste Management

Article 22 of the *San Francisco Health Code* provides for safe handling of hazardous wastes in the City. This article incorporates the state requirements for hazardous waste management specified in the California Health and Safety Code, Chapter 6.5, Article 2, and authorizes the SFDPH to implement the requirements of the Hazardous Waste Control Act related to hazardous waste generators in San Francisco. In accordance with this Article, the SFDPH has the authority to conduct inspections of any facilities where hazardous wastes are stored, handled, processed, disposed of, or treated to recover resources and must maintain records to

document compliance with the Hazardous Waste Control Act. Hazardous wastes generated at a facility would be disclosed in the Hazardous Materials Certificate of Registration and HMBP prepared for the facility in accordance with Article 21 of the *San Francisco Health Code* (described above).

Chapter 34, Section 3407 of the *San Francisco Building Code*

Chapter 34, Section 3407 of the *San Francisco Building Code* includes requirements for projects that disturb lead-based paint on the exterior of buildings or steel structures. This code protects the health and safety of the workers, residents, and occupants from risks associated with lead-based paint by including specific requirements to control lead-based paint during demolition activities.

IMPACTS

SIGNIFICANCE CRITERIA

For purpose of this EIR, the Project would be considered to have a significant effect on the environment if it would:

- involve a substantial risk of accidental explosion or release of hazardous materials (including, but not limited to, oil, pesticides, chemicals, or radiation);
- expose people to existing sources of potential hazards including hazardous materials;
- create a public health hazard or potential public health hazard; or
- interfere with an emergency response plan or emergency evacuation plan.

Definition, identification, and determination of threshold levels of hazardous materials and wastes are provided in the Title 40 of the Code of Federal Regulations and in Title 22 of the California Code of Regulations. Determination of "substantial" hazard or "insignificant" levels of hazardous materials is performed by the regulatory agencies on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

PROGRAM EFFECTS

Accidental Release of Hazardous Materials or Wastes During Normal Operations

Implementation of the Project would provide for increased opportunities for development of a variety of land uses in the activity nodes, and some of the future businesses would involve the use, handling, and storage of hazardous materials or petroleum products or generation of hazardous wastes as part of normal business operations. Many of these uses would likely include construction and use of on-site ASTs or USTs for the storage of hazardous materials or fuel products. Even though these businesses would be required to comply with applicable federal, state, and local regulations, there would remain the potential for an accidental release of hazardous materials or petroleum products, such as a tank leak, spill, or rupture, to occur. If an accidental release were to occur at a redevelopment site within the Project Area, there could be a potential impact to public health and/or the environment unless appropriate precautions are in place. However, as discussed below, compliance of businesses with hazardous materials and hazardous waste regulations would minimize the risk for accidental releases and would ensure safe handling of hazardous materials and wastes at permitted facilities.

As described in the Setting section, the environmental database review identified 426 permitted uses of hazardous materials in the Project Area as of March 2004. While these activities are well regulated to ensure safe handling of hazardous materials and pose less environmental risk than historical practices, there remains a low potential for hazardous materials to affect the soil and/or groundwater because of incidental leakage or spillage that may have gone undetected. The nature of hazardous materials and wastes by definition imply that there is an inherent risk to human health or the environment. The potential for accidents, earthquakes, unauthorized releases, or other mishaps beyond the control of normal operating procedures exists, albeit within acceptable standards, and could result in associated potential for public health and environmental effects. For example, even with improved storage and monitoring practices, an undetected leak from a UST could affect soil, groundwater, or bay water quality, depending on its location. In addition, the proximity of residential uses to industrial or commercial uses

in numerous locations throughout the Project Area would further the potential for public exposure during any accidental release of hazardous materials.

The Project may result in an increase in permitted users of hazardous materials compared to the existing conditions, with an estimated 425,000 square-foot increase in the PDR uses allocated under the Project. This increase in square footage of these land uses may encourage an increase in the number of permitted users of hazardous materials, the range in types of hazardous materials, and/or the volume of hazardous materials used in the Project Area, although those types of increases would generally relate more to individual industry's needs and operating practices than to square footage. However, an increase in developed square footage of these land use types does not necessarily correspond to an increased risk associated with use or handling of hazardous materials or in the generation of hazardous waste. Any increased risk associated with an increase in the volume or type of hazardous materials used in the Project Area would be offset with the newer and improved technology for handling and storage practices that would likely be implemented by new businesses in the future, as well as applicable laws and regulations that govern the use of hazardous materials.

Similar to existing conditions, any new businesses that handle or store hazardous materials or petroleum products would be required to comply with the requirements of the City's hazardous materials handling requirements specified in Article 21 of the *San Francisco Health Code*. In accordance with this article, any facility that handles hazardous materials in excess of specified quantities would be required to obtain a Certificate of Registration from the SFDPH and to implement a Hazardous Material Business Plan (HMBP) that details hazardous material inventories, site layouts, training and monitoring, procedures, and emergency response plans. In addition, facilities that store petroleum products in USTs would be required to obtain a permit for the UST in compliance with Article 21 and to comply with the regulatory requirements for inspection, monitoring, and secondary containment of USTs. Facilities that store petroleum products in ASTs above specified sizes would be required to submit a storage statement to the State Water Resources Control Board and prepare a Spill Prevention Control and Countermeasure Plan. In the unlikely event of a leak or tank rupture from a UST or AST, the spill would likely be contained within the secondary containment system for the tank.

In addition, the SFDPH implements its Risk Management and Prevention Program specified in Article 21A of the *San Francisco Health Code* and requires businesses that handle regulated substances to prepare a written RMP. Similarly, any new businesses that handle hazardous waste would be required to comply with the City's hazardous waste handling requirements specified in Article 22 of the *San Francisco Health Code*.

Compliance with the *San Francisco Health Code*, which incorporates state and federal requirements, would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect the area from potential environmental contamination. Therefore, the potential impact for accidental releases of hazardous materials associated with development of new land uses resulting from implementation of the Project would be less than significant.

Accidental Release of Hazardous Materials or Wastes During Normal Transport Operations

As described previously, the Project could result in the use of hazardous materials in the Project Area, which in turn, could result in an increased potential for transportation-related accidents in the area. Even though transporters of hazardous materials and wastes are required to comply with applicable federal, state, and local regulations, there would remain the potential for an accidental release of hazardous materials or wastes to occur along a truck route within the Project Area, which could then result in a potential impact to public health and/or the environment. However, compliance with federal and state hazardous materials transportation regulations would minimize the risk for accidental releases during normal transport operations.

The California Highway Patrol and the California Department of Transportation are the primary state agencies with responsibility for enforcing federal and state regulations pertaining to transport of hazardous materials within California. The U.S. Department of Transportation regulates the transport of chemicals and hazardous materials by truck between states. These agencies regulate container types and packaging requirements as well as licensing and training for truck operations, chemical handling, and hazardous waste haulers.

As described in Section II, Project Description, truck routes are designated across the community to facilitate truck traffic between industrial and commercial locations and US 101/I-280. The Agency will work with the San Francisco Department of Public Works on enhanced and redesigned truck routes as part of the capital improvements included in the Project. In the Northern Industrial area, Cesar Chavez Street, Cargo Way, Evans Avenue, and Jerrold Avenue would be the principal truck routes. In the southern part of the Project Area, either a new bridge across Yosemite Slough or South Basin, along Fitch Street or another alignment, or an alternative dry land route would connect the industrial areas of South Basin and the Hunters Point Shipyard and US 101. The truck routes would be physically improved to accommodate the trucks, would be landscaped as truck "parkways," and would be clearly signed. Trucks would be prohibited or restricted from using non-truck route roadways.

The proposed truck route program would facilitate truck traffic through the Project Area and would reduce the potential for accidents involving hazardous materials in residential and other sensitive areas by restricting trucks used for the transport of hazardous materials and petroleum products to the designated routes. The potential for truck accidents would also be reduced because the designated roadways would be improved to accommodate the need at trucks.

Therefore, because compliance with existing regulations for transport of hazardous materials would minimize risk of accidental releases during normal transportation operations and because the Project includes provisions for improving and restricting truck routes, this impact would be considered less than significant.

Exposure to Hazardous Materials in Soil or Groundwater During Construction

Implementation of the Project would encourage construction of new developments within the Project Area. As discussed in the Setting Section, there is a high potential to encounter hazardous materials during construction activities in many parts of the Project Area because of the presence of 1906 earthquake fill, previous and current land uses associated with the use of hazardous materials, and known or suspected environmental cases. Without implementation of

proper precautions, workers or the community may be exposed to hazardous materials during construction excavation, grading, and dewatering or related site investigation and remediation activities. Existing regulations for facility closure, UST closure, and investigation and cleanup of soil and groundwater would ensure implementation of measures to protect workers and the community from exposure to hazardous materials during construction.

Parts of the Project Area have been used extensively for industrial purposes for over 100 years, particularly within the Oakinba, Northern Gateway, BIT, IBIP, South Basin, and Hunters Point Shoreline Activity Nodes, and many of these uses have involved the use, handling and storage of hazardous materials. Prior to regulation beginning in the 1970s, industrial discharges – whether intentional, inadvertent, or accidental – were common sources of soil and groundwater contamination, and normal storage and handling of chemicals over extended periods increase the likelihood of spillage or accidents, which can build up over time in the absence of proper cleanup and management procedures.

USTs for the storage of gasoline, diesel, waste oil, and other chemicals are also commonly found at sites throughout San Francisco, and the environmental database review identified 230 (based on CAFD UST and HIST UST database search) sites with historic USTs within the Project Area. If use of a UST was discontinued before permitting requirements were implemented in the 1980s, there would be no regulatory agency tracking of these tanks, and leakage to the soil and/or groundwater could have gone undetected. If encountered during redevelopment activities, these tanks may require proper abandonment or removal, and soil or groundwater contamination resulting from a leaking UST could require cleanup.

Based on the 2004 database review, within the Project Area there are over 426 sites with permitted hazardous materials uses and 160 environmental cases with known or suspected releases of hazardous substances that are in various stages of site investigation, remediation, or cleanup. Environmental contamination resulting from leaking USTs alone has been documented at 123 sites in the Project Area. At any of these known sites where remediation has been completed or where the cases are considered closed, regulatory agencies may have allowed residual contamination to be left in place or may have approved health-based cleanup levels that are based on current land use. If hazardous substances have been left in place at a

site, they may not pose a threat to human health and the environment, but could pose a threat if they become airborne or otherwise released during construction activities.

However, as described in the Setting section and Appendix C, there are extensive federal, state, and local regulations that are designed to protect public health and safety and the environment. Compliance with these regulations by the Agency, the City, private developers, and contractors prior to and during construction would minimize worker and public exposure to hazardous materials in the soil or groundwater.

Over the long term, implementation of the Project would promote new development and would encourage new construction. These activities would expedite any required hazardous materials cleanup and remediation at development sites and would reduce or eliminate future public health issues or environmental damage posed by hazardous materials present in soils and groundwater. This would be a beneficial impact.

Furthermore, compliance with hazardous materials and worker health and safety regulations during construction and proper handling and disposal of excavated materials would minimize any potential impacts to public health or the environment during construction. Thus, potential short-term construction impacts associated with hazardous materials in soils or groundwater would be less than significant.

General Process for Identifying and Remediating Hazardous Materials in Soil and Groundwater

As described in the Setting Section, the City would require appropriate closure of permitted hazardous materials handling facilities in accordance with Article 21 of the *San Francisco Health Code*, which would require investigation and possibly remediation of any identified release as a condition of closure prior to transfer of the site to another party. In addition, the requirement for a site assessment prior to new construction at a site could be triggered by the City under Article 22A of the *San Francisco Health Code* for sites located bayward of the historic high tide line or by the Agency through the Polanco Act for other sites. Each of these regulations would require further investigation and cleanup of a site if a release of hazardous materials were indicated by the environmental assessment. In accordance with these

regulations, the following general process would be required to address the release and reduce the potential threat to human health and the environment during construction:

- Compliance with facility closure requirements of Article 21 of the *San Francisco Health Code* would reduce the potential to leave hazardous materials in place at existing permitted facilities that are closed to facilitate land use changes. The site closure requirements include preparation and implementation of a closure plan addressing the need for further maintenance of the closed facility; methods to ensure that the threat to public health and the environment from residual hazardous materials is eliminated; and methods to ensure that hazardous materials used at the facility are appropriately removed, disposed of, neutralized, or reused. The closure plan must be submitted to the SFDPH for approval and upon submittal, the SFDPH may add additional requirements for closure. These requirements would ensure that facilities permitted by the City are cleaned up to appropriate levels for future land uses at the time of closure or that the responsible party commits to an acceptable timeline for cleanup.
- Article 22A of the *San Francisco Health Code* would apply to parcels bayward of the historic tideline (including areas in Northern Gateway, BIT, IBIP, Hunters Point Shoreline, South Basin and Candlestick Point Activity Nodes) where more than 50 cubic yards of soil would be excavated. This ordinance would require preparation of a site history report, and if appropriate, a soil investigation, soil analysis report, site mitigation plan, and certification report. If the presence of hazardous materials is indicated, a site health and safety plan would also be required. The soil analysis report is submitted to the SFDPH, DTSC and the RWQCB. The site mitigation plan is required to be submitted to and approved by the SFDPH and would also include the planned disposal method for any wastes generated.
- The potential for hazardous materials at a site that is not located bayward of the historic high tide line would be evaluated by the completion of a site-specific Phase I environmental site assessment prior to development. The site assessment includes visual inspection of the property, review of historical documents, and review of environmental databases to assess the potential for contamination from sources such as underground storage tanks, current and historical site operations, and migration from off-site sources. Phase I environmental site assessments are commonly conducted to comply with the due diligence requirements of the federal regulation, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and can be required by the Agency under the Polanco Act.
- Where a Phase I site assessment indicates evidence of site contamination at sites that are not bayward of the historic tideline, additional data would be gathered during a Phase II investigation. This would include actual sampling and laboratory analysis of the soil and groundwater for the suspected chemicals to identify the nature and extent of chemicals in soil and/or groundwater. Appropriate cleanup levels for each chemical, based on current and planned land use, would be determined in accordance with accepted procedures adopted by the lead regulatory agency providing oversight (e.g.,

the DTSC, the RWQCB, or the SFDPH). At sites where there are ecological receptors such as sensitive plant or animal species that could be exposed to hazardous materials, cleanup levels would be determined according to the accepted ecological risk assessment methodology of the lead agency, and would be protective of ecological receptors known to be present at the site.

- If agreed upon cleanup levels were exceeded, a remedial action plan would be prepared to describe remedial alternatives considered for the site. The remedial action plan and the proposed remedial approach would be presented for review and approval by the lead regulatory agency. The plan would include proposed methods to remove or treat identified chemicals to the approved cleanup levels or containment measures to prevent exposure to chemicals left in place at concentrations greater than cleanup levels.
- Upon determination that a site remediation has been successfully completed, the lead agency would issue a closure letter to the responsible party. For sites that are cleaned up to levels that do not allow unrestricted land use, or where containment measures were used to prevent exposure to hazardous materials, the DTSC may issue a deed restriction specifying land use restrictions for the property. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

The BAAQMD may also impose specific requirements to protect ambient air quality from dust, lead, hydrocarbon vapors, or other airborne contaminants during site remediation activities.

Underground Storage Tank Closure Requirements

If removal of a permitted or previously unidentified abandoned or no longer used UST is required, tank closure would be required in accordance with Article 21 of the *San Francisco Health Code*. These requirements include:

1. Submitting a closure plan to the City for approval prior to removal of the UST.
2. Removing and properly disposing of any remaining hazardous materials in the tank, and having the tank removal supervised by the City.
3. Recycling or disposing of the discarded tank.
4. Sampling of the soil, and possibly the groundwater, within the tank excavation.
5. Submitting an Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report to the SFDPH if a chemical release were indicated on the basis of visual observations or sampling within the tank excavation,

6. Filing a final report with the City documenting tank removal activities and any residual contamination left in place. Upon approval of this report, the City will issue a Certificate of Completion.
7. If a release is indicated, the site owner would be required to submit a corrective action plan, including a community health and safety plan, to the SFDPH and RWQCB. Remediation of the site would be required to be conducted in accordance with applicable federal, state and local regulations.

Alternatively, the tank could be abandoned in place if removal were infeasible.

Process for Disposal of Soil and Groundwater

Where remediation or tank removal would require off-site transport of contaminated soil or groundwater, these materials could be classified as a restricted or hazardous waste under state or federal regulations depending on the specific characteristics of the materials. Waste disposal regulations are discussed in Appendix C. The generator of the hazardous wastes would be required to follow state and federal regulations for manifesting the wastes, using licensed waste haulers, and disposing the materials at a permitted disposal or recycling facility.

Process for Discharge of Contaminated Groundwater

Where construction would require dewatering of contaminated groundwater, a release of hazardous materials could occur, potentially resulting in exposure to the public and the environment. If dewatering is required, the groundwater could be discharged to the City's combined storm and sanitary sewer system in compliance with the City's Industrial Waste Ordinance (Public Works Code, Article 4.1) and Order No. 158170 of the San Francisco Public Works Department (see Section III.M, Hydrology and Water Quality, for a discussion of Article 4.1 and Order No. 158170). These regulations require a permit for discharge to the combined sewer and establish discharge limitations and other criteria for discharge. Article 4.1 also prohibits discharge of hazardous wastes into the combined sewer system.

The discharged water would need to be sampled during dewatering to demonstrate that discharge limitations in the ordinance are met. If the groundwater does not meet discharge requirements, on-site pretreatment may be required before discharge to the sewer system. If

standards could not be met with on-site treatment, off-site disposal by a certified waste hauler would be required.

Procedures for the Protection of Worker Safety

Potential worker health and safety impacts associated with site investigations, site remediation, underground storage tank removal, excavation, dewatering, and construction of improvements within sites that have been affected by hazardous materials would be minimized by implementing legally required health and safety precautions. For hazardous waste workers, federal and California OSHA regulations mandate an initial training course and subsequent annual training. Site-specific training may also be required for some workers.

Preparation and implementation of the Site Health and Safety Plan and compliance with applicable federal, state, regional, and local regulations would minimize impacts to public health and the environment. The plan would include identification of chemicals of concern, potential hazards, personal protection clothing and devices, and emergency response procedures as well as required fencing, dust control, or other site control measures needed during excavation. In protecting the workers, who would be closest to potential sources of hazardous materials, the health and safety measures would also serve to protect others who live, work, or visit the area during the temporary construction period.

Underground Utility Construction Process

Redevelopment would involve the improvement of underground utilities and could also include the installation of new utilities by the City. There is the potential to encounter hazardous materials in soil and/or groundwater from adjacent chemical release sites during work on underground utilities which could potentially expose workers, the public, or the environment to hazardous materials. In the event of this, the City would not be responsible for completing a full site remediation, but would require the construction contractor to follow proper health and safety precautions and to dispose of contaminated soil and groundwater safely and legally, as discussed above. Installation of utilities bayward of the historic high tide line would also be subject to the requirements of Article 22A of the *San Francisco Health Code*. This would

ensure the safe handling of contaminated materials during improvement or installation of underground utilities.

Program Benefits

Much of the Project Area is located in areas with known environmental cases or in areas where previous land uses may have resulted in chemical releases to the soil or groundwater. Implementation of redevelopment projects would encourage and expedite cleanup of these sites which may not otherwise be remediated. However, there are real and perceived liabilities associated with development of contaminated properties, and the remediation of these properties could be further enhanced and encouraged with implementation of a well-coordinated development project utilizing brownfields (contaminated and underutilized properties) within the Project Area. Such an approach could be invoked through the Polanco Act or the CLERRA, as described in the State of California Brownfields Regulations and Policies previously discussed in “Regulatory Framework.” Advantages of using this approach include:

- Development of a coordinated and cost-effective approach to investigation and cleanup of the brownfields properties;
- Coordinated regulatory oversight, which simplifies the regulatory process;
- Immunity from liability for the Agency, as well as the developers and their successors; and
- Providing the legal ability for the Agency to recuperate costs from the responsible party(ies).

The US EPA Brownfields Program (further described in Appendix C) can also facilitate this coordinated approach through providing pilot grants and partnering with state and local agencies to remove obstacles to redevelopment.

Land Use Compatibility Due to Changes in Land Use

Under the Project, the Economic Development Program would alleviate blight, directly and indirectly, by stimulating private sector investments and development in the area and job and entrepreneurial opportunities for local residents. In the Northern Gateway (including BIT and

IBIP), Health Center, and Hunters Point Shoreline Activity Nodes, the Project would change zoning from industrial use (M-1, Light Industrial, and M-2, Heavy Industrial) to PDR, which restrict new development of heavy and light industrial uses, while precluding future development of residential and mixed land uses. In the South Basin Activity Node some industrial areas would be rezoned to permit PDR mixed-use districts that would include some residential uses. While the Oakinba Activity Node would be rezoned to PDR uses, no residential uses would be allowed. Where residential land uses are proposed, buffer districts would be introduced to provide a transition zone between mixed-use residential and Core PDR uses.

These changes would involve the displacement and subsequent closure of some industrial land uses and the introduction of new businesses. Without measures to ensure adequate cleanup of closed facilities and cleanup of soil and groundwater to appropriate cleanup levels, future site occupants could be exposed to unacceptable levels of hazardous materials. In addition, known sites where remediation has been completed or in the cases where closure has been granted, regulatory agencies would have approved health-based cleanup levels that are based on current land uses. In some cases, closure may have accepted containment controls such as a cap as adequate to prevent unacceptable exposure to hazardous materials for a given land use, allowing the site owner to leave hazardous materials in the soil and/or groundwater at concentrations higher than otherwise applicable cleanup levels.

If land uses change to a more sensitive use as a result of implementation of the Project, such as changing from existing industrial or commercial use to a new residential or other sensitive use, then stricter cleanup levels would apply. Without additional remediation, new site occupants could be exposed to unacceptable levels of hazardous materials in the soil and/or groundwater. However, compliance with facility closure requirements specified in Article 21 of the *San Francisco Health Code*, and site assessment and remediation requirements that may be triggered by Article 22A or the Polanco Act (described above in Regulatory Framework), would ensure that the potential for hazardous materials to be present is addressed and that further remediation would be conducted under the oversight of the appropriate regulatory agency, if required. Further, a deed restriction would be placed on any property where

hazardous materials are left in place, and in accordance with this restriction, new site owners would be required to comply with any approved plans, such as a Risk Management Plan, Health and Safety Plan, or Cap Maintenance Plan, specifying procedures to be followed to prevent unacceptable exposure to hazardous materials left in place. Because of the well established regulatory framework for site assessment and remediation, impacts related to exposure to hazardous materials due to land use changes are less than significant.

Exposure to Naturally Occurring Asbestos During Construction

As discussed in the Setting section, serpentinite is known to be present in the bedrock that would be excavated for construction in some parts of the Project Area, including the Northern Gateway and Hunters Point Shoreline Activity Nodes. Serpentinite commonly contains naturally occurring chrysotile asbestos (a fibrous mineral that can be a human health hazard if it becomes airborne). In the absence of proper controls, the asbestos could become airborne during excavation and handling of the excavated materials. On-site workers and the public could be exposed to the airborne asbestos unless appropriate control measures are implemented.

However, the construction contractors would be required to comply with the asbestos ATCM, described in the Setting section, to prevent airborne (fugitive) dust containing asbestos from migrating beyond property boundaries during excavation and handling of excavated materials, as well as to protect the workers themselves. Assuming compliance with the asbestos ATCM, potential impacts related to exposure to naturally occurring asbestos in soil and rock during construction would be less than significant.

Exposure to Hazardous Building Materials

Implementation of the Project would promote new construction within the Project Area, which would include demolition or renovation of existing structures, many of which are in dilapidated or deteriorated condition. Hazardous building materials are likely to be present in older structures within the Project Area and could include asbestos-containing materials, lead-based paint, PCBs, and fluorescent lights containing mercury vapors. Demolition or renovation of existing structures could result in potential exposure of workers or the

community to hazardous building materials during construction, without proper abatement procedures, and future building occupants could be exposed if hazardous building materials are left in place. Soil around a structure could also become contaminated by hazardous building materials if these materials were released to the environment.

Pursuant to existing regulations, the Agency would be required to ensure that a hazardous building material survey(s) or audit(s) is conducted for all subsequent Project development that results from implementation of the Project involving demolition or renovation to existing structures and facilities. The survey is required to be completed by a Registered Environmental Assessor or a registered engineer prior to construction or demolition activities. Identified hazardous building materials would be abated in accordance with applicable federal, state, and local laws as described below prior to demolition or renovation. Because of compliance with these regulations, impacts related to exposure to hazardous building materials would be less than significant.

Asbestos

Asbestos-containing building materials are a common hazardous material found in older buildings. If friable or nonfriable asbestos is present, there is a potential for release of airborne asbestos fibers when the asbestos-containing materials are disturbed, unless proper asbestos abatement precautions are taken. In the absence of proper abatement measures, such a release could expose the public and construction workers to airborne asbestos fibers.

Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition (defined as moving or dismantling or any structural member of a building) or any renovation in which more than 100 linear feet, 100 square feet, or 35 cubic feet of asbestos-containing material is to be removed.

Notification to the BAAQMD includes the names, addresses and phone numbers of operations and persons responsible, including the contractor; description and location of the structure to be renovated/demolished including size, age and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The local office of California OSHA must also be notified if asbestos abatement is to be carried out. Pursuant to California law, the DBI would not issue the required permit until the applicant has complied with all notice requirements.

During abatement, asbestos abatement contractors must follow state regulations contained in 8 CCR 1529 and 8 CCR 341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California and the owner of the property where abatement would occur must have a Hazardous Waste Generator Number assigned by, and registered with, the California Department of Health Services. The contractor and the hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and the disposal of the material. The BAAQMD randomly inspects asbestos removal operations and also inspects any removal operations about which a complaint has been received.

Prior to renovation or demolition of any existing structures, the project sponsor would be responsible for ensuring that confirmed asbestos containing materials are removed and disposed of properly.

Lead-Based Paint

Lead-based paint was commonly used prior to 1960, and this type of paint is present in many older buildings such as those in the Project Area. Lead, a heavy metal, is toxic to humans. If lead-based paint is present and has delaminated or chipped from the surfaces of the building materials, there is a potential for the release of airborne lead particles, unless proper lead abatement procedures are followed.

Demolition and renovation activities must comply with Chapter 34, Section 3407 of the *San Francisco Building Code, Work Practices for Exterior Lead-Based Paint*, which includes requirements for projects that disturb 10 square feet or more of lead-based paint on the exterior of buildings or steel structures that were constructed prior to 1979. This code protects the health and safety of the workers, residents, and occupants from risks associated with lead-based paint by including specific notification requirements and performance standards for abatement activities and specifying practices that are prohibited in disturbance or removal of lead-based paint. The Code includes the following notification requirements:

- Notification of the DBI prior to starting work by the owner or contractor describing the nature, location, and schedule of the work;
- A posted sign at all work sites where containment is required stating that lead work is in progress and that public access is prohibited;
- Notification of tenants when the work will be performed on a residential property occupied by one or more tenant;
- Notification of a property owner by the contractor when work on a residential project will disturb lead-based paint;

Specified performance standards include establishment of containment barriers that are at least as effective at protecting human health and the environment as those in the most recent *Guidelines for Evaluation and Control of Lead-Based Paint Hazards* promulgated by the U.S. Department of Housing and Urban Development. Accordingly, any person performing work subject to the Code is required to make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. For activities involving abrasive blasting, hydroblasting, scraping, or sanding of lead-painted exterior surfaces a HEPA vacuum may be required. Burning, torching, and similar activities are prohibited. Following completion of work involving lead paint, all visible lead paint contaminants must be removed from the work site.

The DBI may inspect lead-based paint abatement activities at any time to confirm that the work is being conducted in accordance with Section 3407. The DBI is also responsible for addressing citizen complaints related to covered abatement activities and may issue a Notice of

Violation or Stop Work order if the work is not being conducted in accordance with Section 3407, and may also impose fines against the responsible party.

Polychlorinated Biphenyls and Fluorescent Light Tubes

PCBs, a highly toxic group of materials, were commonly manufactured and used in the United States between 1929 and 1977, and are often found in older buildings for uses such as electrical transformers and capacitors, old electrical equipment, and fluorescent light ballasts. Although the EPA has banned the use of PCBs in new electrical equipment, various pieces of PCB-containing equipment could be found at older locations in the Project Area. If PCBs are present in a structure to be renovated, leakage could expose workers to unacceptable levels of PCBs (greater than 5 parts per million, based on Title 22, California Code of Regulations).

Fluorescent light tubes are considered hazardous because, in addition to PCBs in the light ballasts manufactured after 1978, they contain mercury, a highly toxic heavy metal. Removal of fluorescent light tubes could result in exposure to mercury vapors if the lights are broken. Spent fluorescent light tubes commonly contain mercury vapors at levels high enough to be considered a hazardous waste under California law; depending on the levels of mercury present, the light tubes may also be classified as hazardous under federal law.

The Code of Federal Regulations, Title 40, contains the Toxic Substances Control Act regulations. This act restricts the use and storage of PCB-containing transformers (defined as those containing at least 500 parts per million PCBs). The EPA also requires that all PCB-containing transformers be registered with fire protection personnel, whether in use or in storage, and that they be inspected every three months. If a leak is found, it must be contained to prevent release and exposure, and then the source of the leak must be eliminated. Disposal of hazardous levels of PCBs and mercury is regulated under both federal and state laws.

Interference with Emergency Response Plans or Emergency Evacuation Plans

Implementation of the Project would encourage new construction in the Project Area that could result in an increased numbers of residents and employees which, in turn, could result in congestion in the event of an emergency evacuation. San Francisco ensures fire safety

primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing buildings are required to meet standards contained in these codes. In addition, the building plans for any new residential project greater than two units are reviewed by the Fire Department (as well as the DBI) in order to ensure conformance with these provisions. Buildings constructed as part of redevelopment activities would be required to conform to these standards, which (depending on building type) may also include development of an emergency procedure manual and an exit drill plan.

Compliance with the *San Francisco Building Code* and *Fire Code* would ensure that potential fire hazards related to redevelopment activities (including those associated with hillside development, hydrant water pressure, and emergency access) would be minimized during the permit review process and that redevelopment projects would not interfere with an existing emergency response or emergency evacuation plan. Therefore, this impact is less than significant.

NOTES – Hazards and Hazardous Materials

- ¹ Geomatrix Consultants, *Reference Report Summarizing Environmental Conditions, Bayview Hunters Point Brownfields Pilot Project, San Francisco, California*. April, 1998.
- ² San Francisco Redevelopment Agency, *Summary Report of Environmental Conditions, Bayview Hunters Point Survey Area*. April, 1998.
- ³ Environmental Data Resources, Inc., *The EDR Area Report, Study Area Hunters Point Project Area, San Francisco, California*. March 3, 2004.
- ⁴ PAHs are group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. PAHs usually occur naturally, but they can be manufacture. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment in the air, water, and soil. They can occur in the air, either attached to dust particles or as solids in soil or sediment.
- ⁵ Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids, such as paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment (i.e., copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions).
- ⁶ U.S. EPA, Hunters Point Naval Shipyard, California, EPA ID # CA1170090087, Site Overview. Accessed at <http://www.yosemite.epa.gov/r9/sfund/overview.nsf/>, March 26, 2004.
- ⁷ Greenfields are land where there have been no previous commercial or industrial land uses.

III. Environmental Setting and Impacts
K. Hazards and Hazardous Materials

- ⁸ California Redevelopment Association, The Polanco Redevelopment Act, Why do Redevelopment Agencies Need the Act? Accessed at <http://www.calredevelop.org/Leg/Polanco/Polanco.htm>, April 21, 2004.
- ⁹ California Air Resources Board, Regulatory Advisory, *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*, July 29, 2002.
- ¹⁰ Ultramafic rocks are formed in high temperature environments well below the surface of the earth.
- ¹¹ Serpentine is a naturally occurring group of minerals that can be formed when ultramafic rocks are metamorphosed during uplift to the earth's surface. Serpentinite is a rock consisting of one or more serpentine minerals, formed when ultramafic rocks metamorphose. This rock type is commonly associated with ultramafic rock along faults such as the Hayward fault. Small amounts of chrysotile asbestos, a fibrous form of serpentine minerals, are common in serpentinite.
- ¹² Asbestos is a term used for several types of naturally occurring fibrous materials found in many parts of California.
- ¹³ The City and County of San Francisco are not subject to the California *Building Code* as San Francisco has stricter local requirements.
- ¹⁴ Regulated substances are 1) any chemicals designated as an extremely hazardous substance by the U. S. Environmental Protection Agency (U.S. EPA) as part of its implementation of Superfund Amendments and Reauthorization Act (SARA) Title III; or 2) any chemicals listed in Title 40 of the Federal Code of Regulations pursuant to the Clean Air Act.

L. GEOLOGY AND SOILS

This section identifies the existing geology and soils setting of the Project Area, including geological and seismic hazards.

SETTING

The Project Area is in the eastern area of San Francisco, in the northern portion of the San Francisco Peninsula. The Peninsula is bordered by San Francisco Bay, a northwest-trending structural depression on the east, and by the Pacific Ocean on the west. The Peninsula itself, as well as the greater San Francisco Bay Area, comprises a portion of coastal California that is known as the Coast Range Geomorphic Province. The Coast Range Geomorphic Province includes the northwest trending belt of mountain ranges, valleys, and basins that parallel the California coastline from Point Conception north to the Oregon border. This province forms a nearly continuous barrier between the Pacific Ocean to the west and the San Joaquin Valley to the east. The only significant break occurs in the San Francisco Bay Area where the Sacramento and San Joaquin Rivers have breached the ranges to flow into the Pacific.

Natural landforms within San Francisco have resulted from the interaction of erosion of bedrock terrain in the central part of the San Francisco Peninsula, deposition of dune sands and alluvial sediments on the low-lying ground adjacent to the Pacific Ocean and San Francisco Bay, and widespread tectonic movement associated with the San Andreas fault system. The present landforms are generally separable into three distinct groups: northwest-trending structural highlands, undulating shoreline topography, and the San Francisco Bay. These natural landforms have been modified along the bay side of the Peninsula by the placement of fill materials in shallow bays and estuaries to reclaim usable land from the bay.

Geology of the Project Area

The Project Area is underlain by a mixture of Late Mesozoic Era bedrock of the Franciscan Complex. The late Mesozoic Era occurred between 65 to 100 million years ago. Beneath San Francisco Bay, and along much of its margin, the Franciscan bedrock is overlain directly by an

unconsolidated sedimentary sequence, which exceeds 400 feet in thickness in certain areas. The sequence is often subdivided into three units – Older Bay Mud (or Old Bay Clay), Bay Side Sands, and Younger Bay Mud – which were deposited during the Quaternary Period.¹ Artificial fill has been placed along the margins of the bay to claim marshland once covered by shallow water.

Varying Cenozoic Era sedimentary deposits, such as slope debris, ravine fill, landslide deposits, undifferentiated deposits, and Bay Mud overlay the Franciscan Complex bedrock in the Project Area. The Cenozoic Era occurs after the Mesozoic Era, which ended 65 million years ago, and continues to the present day. Recently placed artificial fill materials are also present in some of the lower lying areas of the project area.

Cretaceous and Jurassic Period Franciscan Complex and Associated Rocks

Rocks of the Franciscan Complex refer to a group of rocks sharing a common tectonic history, typically consisting of highly deformed, altered, and fractured volcanic rocks, sedimentary rocks, metamorphic rocks, and serpentine. The Project Area includes such Franciscan Complex rocks as chert, sandstone, shale, greenstone, and serpentine, occurring both as surface outcrops in areas at higher elevations and as bedrock beneath the Quaternary Period deposits.

Quaternary Period Deposits

Undifferentiated Sedimentary Deposits

The Pleistocene Epoch undifferentiated sedimentary deposits in the Project Area are generally sands with variable characteristics. The Pleistocene Epoch is a part of the Cenozoic Era, and occurred between 1.8 million to 11,000 years ago. They may range from clayey or silty to relatively clean sands which have been derived from winnowed dunes, slopes, and weathered bedrock. The engineering properties of the undifferentiated deposits are related to their material properties and are also dependent on the level of saturation.

Slope Debris, Ravine Fill, and Landslide Deposits

The slope debris and ravine fill materials can occur at the surface, or interfinger with the Bay Mud deposits in areas of close proximity to bedrock surface exposures. A range of materials is included in this classification, and therefore the composition is highly variable and may include mixtures of gravel, sand, silt, and clay. Loose gravels composed of rock fragments and medium stiff to stiff clays of low to medium plasticity are characteristic of these materials. The composition and structure of the landslide deposits are dependent on the source and type of landslide. The slope debris, ravine fill, and landslide deposits are typically only localized units.

Bay Mud

Bay Mud is usually separable into three units – Older Bay Mud (or Old Bay Clay), Bay Side Sands, and Younger Bay Mud. The Bay Side Sands may or may not be present as a layer in between the Older Bay Mud and the Younger Bay Mud. The average thickness of the Bay Mud deposits appears to increase toward the San Francisco Bay and in areas formerly occupied by tidal stream channels. The Bay Mud is more than 100 feet thick near the Islais Creek Channel at the north end of the Project Area.

Older Bay Mud

Older Bay Mud was deposited from approximately 130,000 to 40,000 years ago, and is thought to be primarily an estuarine clay with subordinate alluvial sediments that were deposited during sea level fluctuations associated with the Sangamon Interglacial Period.² The Sangamon Interglacial Period is a major division of Pleistocene time. Older Bay Mud overlies older sediments and bedrock throughout the areas beneath and adjacent to San Francisco Bay. The thickness and upper surface of the Older Bay Mud are highly irregular, largely due to erosion. Typically, the Older Bay Mud comprises the following characteristics: light to dark green-gray; stiff to very stiff; moderately to highly plastic; and clay to silty clay. Layers and lenses of gray to brown, medium to fine grained, dense to very dense sand, clayey sand, and gravel are common throughout the unit. Older Bay Mud is typically overconsolidated, due to burial and repeated desiccation.

Bay Side Sands

Bay Side Sands commonly overlay the Older Bay Mud, but in some areas it is absent and the Older Bay Mud may be in direct contact with the overlying Younger Bay Mud. Occasionally, the Bay Side Sands may lie directly on other older sediments or bedrock. Deposition of the Bay Side Sands is thought to have taken place during the Late Pleistocene through the Holocene Epochs, from approximately 40,000 years ago to the present.³ (The Holocene Epoch ranges from 11,000 years ago to the present). This unit may be comprised of windblown and alluvial sands deposited during a low sea level stand associated with the Wisconsinian Period glaciation. The Bay Side Sands are typically tan to reddish brown, dense to very dense, medium to fine grained sand, silty sand, and clayey sand. Occasional lenses or layers of green to gray, stiff to very stiff, moderately to highly plastic clay and silty clay occur within the Bay Side Sands. At relatively shallow depths, the Bay Side Sands may be loose to medium dense and overlain by artificial fill.

Younger Bay Mud

Deposition of the Younger Bay Mud has occurred during the Holocene Epoch, extending from approximately 9,000 years ago to the present.⁴ The average thickness of the Younger Bay Mud appears to increase toward the Bay and in areas formerly occupied by tidal stream channels, such as China Basin and Islais Creek Basin. The extent of Younger Bay Mud closely follows the shoreline and marshland boundaries that were present along the eastern margin of San Francisco prior to their reclamation by filling. Younger Bay Mud commonly overlies Bay Side Sand deposits and laterally may be in contact with undifferentiated colluvium/alluvium near areas of bedrock surface exposure. In several areas, Younger Bay Mud appears to overlie bedrock and Older Bay Mud deposits. Younger Bay Mud is generally covered by artificial fill in tidal marshlands that have been reclaimed from the Bay.

Composition of the Younger Bay Mud ranges from 30 to 60 percent clay, 30 to 60 percent silt, and 1 to 10 percent sand. The Younger Bay Mud is generally olive-green to blue-gray, soft to medium stiff, saturated, and can contain numerous shell and peat rich layers. Typically, Younger Bay Mud exhibits a highly plastic, highly compressible behavior, has a very low permeability, and is typically consolidated to slightly overconsolidated, but can be underconsolidated.

Artificial Fill

Beginning in the mid-1800s, filling of the bay and tidal marshlands adjacent to San Francisco was initiated to provide land for industrial development. Prior to filling, the bay shoreline comprised a series of small inlets and marshlands separated by bedrock peninsulas. As discussed previously in Section K (Hazards and Hazardous Materials), primary source materials for fill were obtained from dune sands, quarried rock, industrial refuse, and building debris following the 1906 earthquake.⁵ Artificial fill commonly overlies Younger Bay Mud, but along the margins of the pre-1860 marshlands and estuaries, the fill appears to overlie Bay Side Sands and colluvium/alluvium deposits.

The composition of the artificial fill is highly variable, ranging from cobble to boulder sized rubble in a loose to medium dense matrix of sand and gravel. The larger sized material includes such items as concrete, bricks, porcelain, glass, and wood. Occasionally, areas of plastic clays, presumably dredged from the bay, are encountered in the fill layer. The engineering properties of the artificial fill are highly variable due to the mixture of materials that may constitute artificial fill.

SUBSURFACE CONDITIONS WITHIN EACH ACTIVITY NODE

Northern Gateway Activity Node and BIT/IBIP Areas

The topography within the Northern Gateway Activity Node ranges from less than 25 feet to approximately 100 feet above mean sea level (AMSL). Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet AMSL.

Surface and subsurface materials include artificial fill, Bay Mud, slope debris, ravine fill, and Franciscan Complex rocks, including serpentine. With the exception of the very south-southeast portion of the Northern Gateway Activity Node where Franciscan Complex rocks are exposed at the higher elevations, and slope debris and ravine fill materials have eroded from the uplands, this area is a generally low-lying area with artificial fill, largely underlain by Bay Mud. The thickness of artificial fill and Bay Mud are the greatest near the Islais Creek Channel. The thickness of

artificial fill near the Islais Creek Channel is up to about 50 feet. The thickness of Younger Bay Mud underlying the artificial fill near the Islais Creek Channel is up to about 70 feet.

Town Center Activity Node

The topography within the Town Center Activity Node ranges from approximately 25 feet to approximately 100 feet AMSL. Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet AMSL.

Surface and subsurface materials present at the Town Center Activity Node include artificial fill, Bay Mud, undifferentiated sediments, slope debris, ravine fill, and Franciscan Complex rocks, including serpentine, sandstone, shale, and greenstone. The northern portion of this activity node is underlain by artificial fill and Bay Mud. The thickness of artificial fill in the northern portion of the node is up to about 10 feet. The thickness of Younger Bay Mud underlying the artificial fill in the northern portion of the Town Center Activity Node is up to about 10 feet. Most of the remainder of the activity node is underlain by undifferentiated sediments, slope debris, and ravine fill. Very small portions of the activity node that are in upland areas to the east to northeast and the southwest have Franciscan Complex rock exposures at the ground surface.⁶

Health Center Activity Node

The topography within the Health Center Activity Node ranges from approximately 25 feet to approximately 75 feet AMSL. Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet AMSL.

Surface and subsurface materials present at this activity node include artificial fill, Bay Mud, undifferentiated sediments, slope debris, ravine fill, and Franciscan Complex rocks, including sandstone and shale. With the exception of a very small upland area to the north with Franciscan Complex rock exposures at the ground surface, this activity node is underlain by artificial fill overlying Bay Mud, undifferentiated sediments, slope debris, and ravine fill. The southeast area closest to the South Basin is underlain by artificial fill placed over tidal flats. The thickness of artificial fill in the southeast area of this node is up to about 10 feet. The thickness of Younger

Bay Mud underlying the artificial fill in the southeast area of this activity node is also up to about 10 feet.⁷

Oakinba Activity Node

The topography within the Oakinba Activity Node ranges from less than 25 feet AMSL to approximately 100 feet AMSL. Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet AMSL.

Surface and subsurface materials present at the Oakinba Activity Node include artificial fill, Bay Mud, slope debris, ravine fill, and Franciscan Complex rocks, including serpentine. With the exception of the very south-southeast area where Franciscan Complex rocks are exposed at the higher elevations, and slope debris and ravine fill materials have eroded from the uplands, the Oakinba Activity Node is a generally low-lying area with artificial fill, largely underlain by Bay Mud. Artificial fill thickness ranges from approximately 50 to 70 feet.⁸

South Basin Activity Node

The topography within the South Basin Activity Node ranges from less than 25 feet to approximately 75 feet AMSL. Groundwater elevations vary with respect to the topography, and range from mean sea level to about 60 feet AMSL.

Surface and subsurface materials present at the South Basin Activity Node include artificial fill, Bay Mud, undifferentiated sediments, slope debris, ravine fill, and Franciscan Complex rocks, including sandstone, shale, and greenstone. The activity node is mostly underlain by artificial fill overlying Bay Mud, undifferentiated sediments, slope debris, and ravine fill. Most of the eastern area of South Basin is underlain by artificial fill placed over tidal flats, except for two outcroppings of Franciscan Complex rock. The thickness of artificial fill in the eastern area of this activity node is up to about 30 feet. The thickness of Younger Bay Mud underlying the artificial fill in the eastern area is up to about 40 feet.

Hunters Point Shoreline Activity Node

The topography within the Hunters Point Shoreline Activity Node ranges from less than 25 feet to approximately 225 feet AMSL. Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet or more AMSL.

Surface and subsurface materials present include artificial fill, Bay Mud, slope debris, ravine fill, and Franciscan Complex rocks, including sandstone, shale, and serpentine. The northern area of this activity node, near the fringe of the San Francisco Bay, is underlain by artificial fill overlying Bay Mud. The thickness of artificial fill in the northern area is up to about 30 feet. The thickness of Younger Bay Mud underlying the artificial fill in the northern area is up to about 40 feet. The remainder of the activity node is in an upland area of competent Franciscan Complex rocks with minor areas of slope debris and ravine fill.

Candlestick Point Activity Node

The topography within the Candlestick Point Activity Node ranges from less than 25 feet to approximately 300 feet AMSL. Groundwater elevations vary with respect to the topography, ranging from mean sea level to about 60 feet or more AMSL.

Surface and subsurface materials present at the Candlestick Point Activity Node include artificial fill, Bay Mud, undifferentiated sediments, slope debris, ravine fill, landslide deposits, and Franciscan Complex rocks, including sandstone, shale, chert, and greenstone. A majority of this activity node is covered by artificial fill overlying Bay Mud. The thickness of artificial fill in this activity node is up to about 20 feet. The thickness of Younger Bay Mud underlying the artificial fill in this activity node is up to about 30 feet. The west-southwest area of this activity node is an upland area of exposed, competent Franciscan Complex rocks with minor areas of undifferentiated sediments, slope debris, ravine fill, and landslide deposits.

GEOLOGIC HAZARDS

Landslides

Areas with the greatest potential for landslides are the upland areas with steep slopes underlain by weathered bedrock or serpentine. Landslides are most likely to occur during periods of high rainfall when subsurface materials become saturated or during earthquakes. The upland areas of the Hunters Point Shoreline and Candlestick Point Activity Nodes have slopes with the potential for landslides (see Figure III.L-1).

Erosion

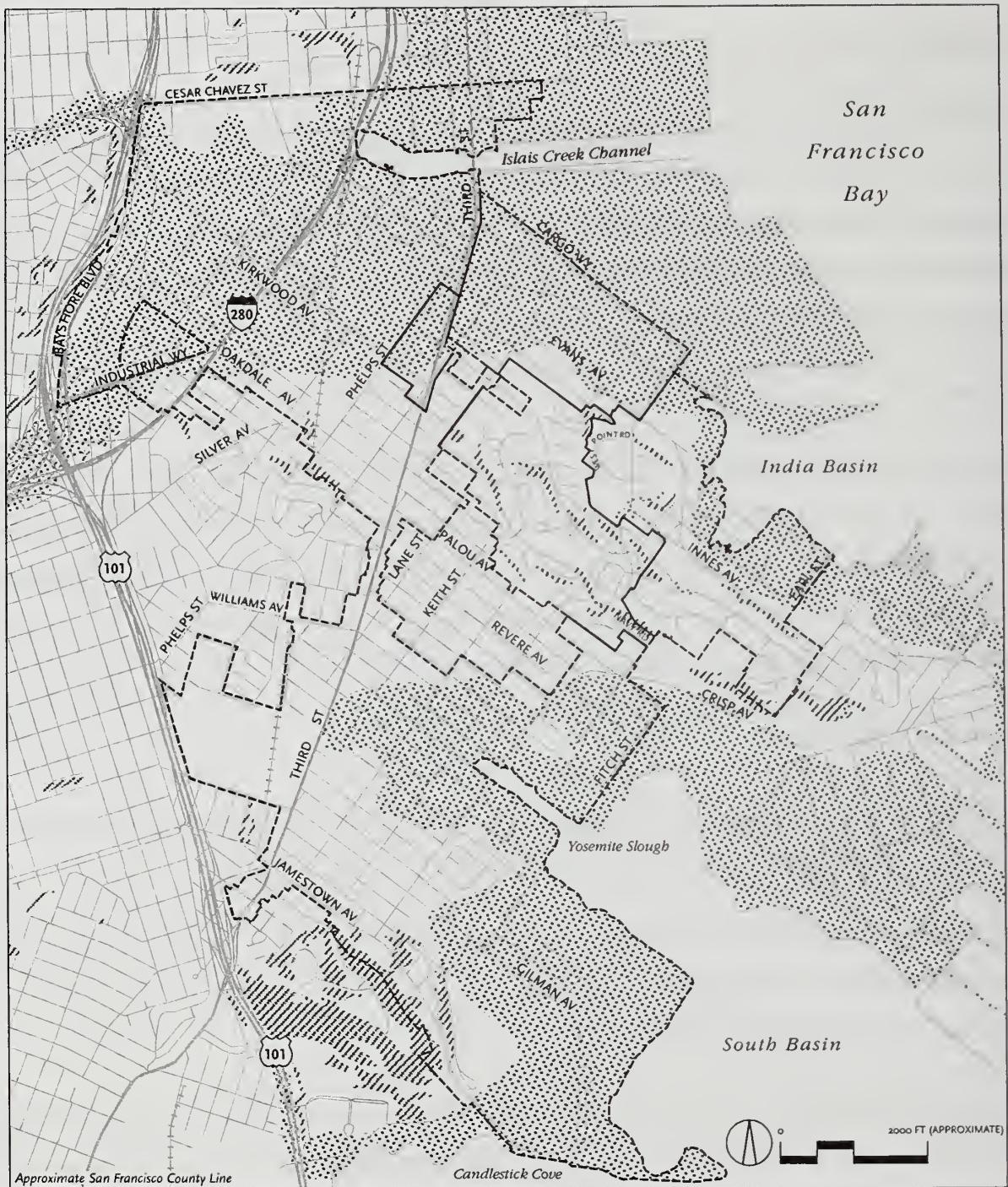
Erosion is caused by wind or water forces on bare, unprotected earth materials. Most of the Project Area is developed, except for some of the upland areas in the Hunters Point Shoreline and Candlestick Point Activity Nodes; and lowland areas in the Hunters Point Shoreline, Candlestick Point and South Basin Activity Nodes. Therefore, the undeveloped upland areas in these activity nodes are most susceptible to the effects of erosion.

Faults and Seismicity

The Project Area is located in a seismically active region which has been subjected to several strong earthquakes during historic time. No active faults are known in the Project Area.

Active faults that may affect the Project Area and historic earthquakes attributed to each fault are listed in Table III.L-1. The seismicity associated with each pertinent fault, including estimated slip rates, is summarized in Table III.L-2.

As shown in Table III.L-2, for the faults closest to the project site, the largest earthquake that a given fault is capable of generating (M_{max}) would be a magnitude 7.9 event on the San Andreas fault and a magnitude 7.1 event on the Hayward fault.⁹



SOURCE: California Department of Conservation, Division of Mines & Geology

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----- Redevelopment Project Areas and Activity Nodes

[Stippled Box] Area of potential liquefaction [Hatched Box] Area of potential landslide

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.L-1 ADVERSE SOIL CONDITIONS AND SEISMIC HAZARDS

TABLE III.L-1
HISTORIC EARTHQUAKES

Date	Magnitude	Fault	Locale
June 10, 1836	6.5 ¹	San Andreas	San Juan Bautista
June 1838	7.5 ¹	San Andreas	San Juan Bautista
October 8, 1865	6.3 ²	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0 ²	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9 ³	San Andreas	Golden Gate
July 1, 1911	6.6 ⁴	Calaveras	Diablo Range, East of San Jose Loma Prieta, Santa Cruz
October 17, 1989	7.1 ⁵	San Andreas	Santa Cruz Mountains

Sources:

¹ Petersen, M. D., W. A. Bryant, C. H. Cramer, T. Cao, and M. S. Reichle, *Probabilistic Seismic Hazard Assessment for the State of California*, California Division of Mines and Geology (CDMG), Open File Report 96-08 1996; U.S. Geological Survey (USGS) Open File Report 96-706.

² Toppozada, T. R., C. R. Real and D. L. Park, Preparation of Isoseismal Maps and Summaries of Reported Effects for pre-1900 California Earthquakes; CDMG. Open File Report 81-11 SAC, 1981.

³ Petersen, M. D., 1996.

⁴ Real, C. R., T. R. Toppozada and D. L. Parke, Earthquake Epicenter Map of California; CDMG Map Sheet 39, Scale 1:1,000,000, 1978; Toppozada, T.R., *History of Earthquake Damage in Santa Clara County and Comparison of 1911 and 1984 Earthquakes*, in the 1984 Morgan Hill, California Earthquake, CDMG Special Publication 68, 1984.

⁵ USGS, Lessons Learned from the Loma Prieta, California Earthquake of October 17, 1989, *Circular 1045*.

TABLE III.L-2
FAULT SEISMICITY

Fault	Approximate Distance to Site ¹ (Miles)	Maximum Moment Magnitude (M _{max}) ²	Slip Rate ² (mm/year)
San Andreas	9	7.9	24
San Gregorio	36	7.3	5
Hayward	12	7.1	9
Calaveras	25	6.8	6
Concord	25	6.9	6
Rodgers Creek	30	7.0	9

Sources:

- ¹ Jennings, C. W., Fault Activity Map of California, California Department of Conservation, Division of Mines and Geology (CDMG), California Geologic Data Map Series, Map No.6., 1994.
- ² Petersen, M. D., W. A. Bryant, C. H. Cramer, T. Cao, and M. S. Reichle, *Probabilistic Seismic Hazard Assessment for the State of California*, CDMG Open File Report 96-08, 1996; U. S. Geological Survey Open File Report 96-706.

Note:

The maximum moment magnitude earthquake (M_{max}) is defined as the largest earthquake that a given fault is considered capable of generating. The seep rate is defined as the rate one side of the fault slides past the other side.

On the basis of research conducted since the 1989 Loma Prieta earthquake (moment magnitude [M_w] 6.9, epicenter approximately 55 miles southeast of the Project Area), the U.S. Geological Survey (USGS) has continually updated the estimated probability of at least one large earthquake (M_w 6.7 or greater) in the San Francisco Bay region: in the 30-year period between 2003 and 2032, the probability of such an earthquake is about 62 percent.¹⁰ The earthquake may occur in any part of the region, but the San Francisco Peninsula segment of the San Andreas fault and the Hayward fault are the most likely sources. The San Andreas fault has a 21 percent probability of generating a M_w 6.7+ earthquake during the next 30 years. The Hayward-Rodgers Creek fault has a 27 percent probability of generating a M_w 6.7+ earthquake in this timeframe.¹¹ Earthquakes of this magnitude are sufficient to create ground accelerations in bedrock and in stiff unconsolidated sediments severe enough to cause major damage to structures and foundations not designed specifically to resist the lateral forces generated by earthquakes, and to underground utility lines not designed with sufficient flexibility to accommodate expected seismic ground motion.¹² Such an event is expected to cause more damage than the 1989 Loma Prieta earthquake.¹³

For a M_{max} 7.9 event on the San Andreas fault, the duration of strong shaking from such an earthquake would be approximately 60 to 80 seconds. Correlations between distance from a causative fault and mean values of the peak bedrock accelerations and the effects of local soil conditions on peak ground accelerations have been developed by Seed and Idriss, Joyner and Boore, and Campbell.^{14,15,16} Based on these correlations for a M_{max} 7.9 event, the mean peak ground surface acceleration (g) for the project area is computed to be 0.50 to 0.55 g. Where the moment magnitude measures the size of earthquakes, the ground surface acceleration defines the speed at which soil or rock materials are displaced by seismic waves. As an example, the Northridge Earthquake resulted in the range of 1.9 g over a large area.

The previous discussion provides a general overview of estimated earthquake probability and related effects for the Bay Area. At the Project Area, the severity of ground shaking would ultimately be influenced by a number of factors, including the duration and intensity of the earthquake, the proximity of the Project Area to the location of the earthquake, and the type of geologic materials underlying the site. In general, the larger the earthquake and the closer a site is

to its epicenter, the higher the intensity of shaking felt at the site. However, drastic differences in intensity may be observed at neighboring sites due to differing subsurface conditions.

REGULATORY FRAMEWORK

Federal

Uniform Building Code

The Uniform Building Code (UBC) defines different regions of the United States and ranks them according to their seismic hazard potential. There are four types of these regions, which include Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential.

State

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC). The CBC is based on the UBC, with amendments for California conditions.

Chapter 23 of the CBC contains specific requirements for seismic safety. Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in Cal-OSHA regulations (Title 8 of the California Code of Regulations [CCR] and in Section A33 of the CBC.

Seismic Hazards Mapping Act

The California Division of Mines and Geology (CDMG) also provides guidance with regard to seismic hazards. Under CDMG's Seismic Hazards Mapping Act, seismic hazard zones are to be

identified and mapped to assist local governments in land use planning. The intent of this publication is to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes. In addition, CDMG's Special Publications 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation

Local

Community Safety Element of the General Plan

The purpose of the Community Safety Element is to reduce future loss of life, injuries, property loss, environmental damage, and social and economic disruption from natural or technological disasters. The Community Safety Element focuses on seismic hazards, because the greatest risks to life and property in San Francisco result directly from the ground shaking and ground failure associated with large earthquakes.

San Francisco Building Code

The Department of Building Inspection, in its review of the building permit application, requires the project sponsor to prepare a geotechnical report that assesses the nature and severity of the hazards at the site and recommends project design and construction features to reduce the hazards. To ensure compliance with all San Francisco Building Code provisions regarding structural safety, when the Department of Building Inspection reviews the geotechnical report and building plans for a proposed project, it determines necessary engineering and design features for the project to reduce potential damage to structures from ground shaking.

IMPACTS

SIGNIFICANCE CRITERIA

For purposes of this EIR, the Project would be considered to have a significant effect on the environment if it would expose people or structures to major geologic/seismic hazards (landslides, subsidence, erosion, and liquefaction) where the risk to people and property could not be reduced

through standard engineering and construction measures in accordance with regulations, codes, and professional standards.

PROGRAM EFFECTS

Potential geologic hazards in the Project Area include seismic activity, landslides, erosion, damage from settlement or unstable surface materials, asbestos, and corrosive soils. These potential hazards are described below.

Seismic Hazards

Structures may be damaged and people may be injured or killed as a result of earthquakes due to rupture along a fault, ground shaking, liquefaction, landslides, and tsunamis. The potential for these hazards to occur within San Francisco, and the Project Area in particular, is discussed below.

Fault Rupture

Fault rupture typically occurs along or close to the trace of currently active faults. There is no evidence to indicate that the Project Area is located on identified active faults. Therefore, impacts due to fault rupture at the Project Area from a future earthquake are considered unlikely and a less-than-significant impact would result. No mitigation is required.

Ground Shaking

The San Francisco Bay Area is expected to experience very strong to violent ground shaking during large earthquakes occurring on any of the major active faults in the Bay Area. Earthquakes on more distant faults could also affect the region. During moderate to severe ground shaking, the Project Area could be exposed to lateral and vertical forces that could cause damage to structures, unless structures were designed to withstand high levels of ground shaking.

Because it is necessary to design structures and facilities to withstand the anticipated effects of seismic activity from nearby as well as distant faults, there is a comprehensive regulatory environment in place to ensure the risks to people and property are managed to the extent practical. The major state regulations protecting the public from geo-seismic hazards, other than

surface faulting, are contained in the California Code of Regulations, Title 24, Part 2, the California Building Code¹⁷ and the California Public Resources Code, Division 2, Chapter 7.8, The Seismic Hazards Mapping Act. Both the California Building Code and the Seismic Hazards Mapping Act apply to public buildings and a large percentage of private buildings intended for human use or occupancy. On July 29, 2003, California adopted a new building code for most commercial construction, developed by the National Fire Protection Association, as the basis for updating the state's building code. The state also adopted the International Building Code as the basis for California's residential construction. Following incorporation of the new codes into the state's existing building code, and a series of public hearings, the revised code could become law as early as 2005. Project permits issued after the adoption of the law would be subject to the provisions of the revised code. At the local level, the Project would be required to conform to the *San Francisco Building Code*, which includes seismic safety performance standards that apply to all new construction in the city. The San Francisco Department of Building Inspection (DBI) would, in its review of building permit applications, require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the ground shaking hazard(s) on the site and recommend project design and construction features that would reduce the hazard(s).

To ensure compliance with all current *San Francisco Building Code* provisions regarding structural safety, when the DBI reviews the geotechnical report and building plans for a development proposal, it determines the necessary engineering and design features for the project to reduce potential damage to structures from ground shaking.

Background information provided to DBI would require building construction measures that ensure the security and stability of adjoining properties as well as any project site within the Project Area during construction. Because these procedures are required under existing DBI rules, no additional geotechnical mitigation measures would be needed to avoid significant environmental impact through the environmental review process. In addition, any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI review process would constitute minor modifications of the project and would not require additional environmental analysis. Therefore, potential damage to structures from ground shaking at the Project Area would be less-than-

significant through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the *San Francisco Building Code*.

Liquefaction

Soil liquefaction is a phenomenon in which saturated, cohesionless soils lose their strength due to the build-up of excess pore water pressure, especially during cyclic loadings (shaking), such as those induced by earthquakes. (Pore water pressure refers to the condition when water in the voids of an element of saturated soil will be under pressure, either to the physical altogether or the soil as a result of external forces.) In the process, the soil acquires a mobility sufficient to permit both horizontal and vertical movements if not confined. Soils most susceptible to liquefaction are loose, clean, uniformly graded, fine grained sands. Gravels and coarse grained sands are also susceptible to liquefaction, as are saturated, silty and clayey sands.

The consequences of liquefaction could include seismically induced settlements, additional lateral soil pressures on underground structures, additional lateral loads on piles, downdrag forces on underground structures and pile foundations, localized lateral deformation of fills, and floatation (buoyancy) of underground structures (i.e., tanks, pipelines, and manholes) underlain by the potentially liquefiable soils.

The lower-lying areas of all activity nodes are underlain by artificial fill and are, therefore, susceptible to liquefaction during a seismic event. When the DBI reviews the geotechnical report and building plans, as described above, it also determines necessary engineering and design features for the project to reduce potential damage to structures from liquefaction. Therefore, potential damage to structures from liquefaction at any project site within the Project Area would be mitigated to less-than-significant levels through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the *San Francisco Building Code*.

Earthquake-induced Landslides

Past earthquakes have triggered landslides on both steep slopes and relatively level ground. Areas with the greatest potential for landsliding are the upland areas with steep slopes underlain by

weathered bedrock or serpentine. As discussed previously, the upland areas of the Hunters Point Shoreline and Candlestick Point Activity Nodes have slopes with the potential for landsliding. Earthquake-induced landslides would be a less-than-significant impact in these areas because prior to issuance of any building permit for upland, hillside areas in the Hunters Point Shoreline and Candlestick Point Activity Nodes, a site-specific geotechnical study identifying landslide hazard-prone areas and engineering recommendations to mitigate potential risks shall be submitted to the San Francisco Department of Building Inspection. Measures to reduce risk could include, but would not be limited to, flattening the slope and/or unloading the top of the slope, improving drainage, constructing retaining structures near the toe, and importing soil material.

Tsunami

Long-period sea waves generated by offshore earthquakes are known as tsunamis. Damage to surface structures can be caused by inundation, and subsurface structures may be affected by the resulting erosion. The largest tsunami wave ever recorded at the Golden Gate occurred following the 1964 Alaska earthquake and registered a run-up of 7.5 feet. The USGS has estimated the probable maximum tsunami wave run-up at the Golden Gate will be 20 feet with a return period of 200 years. The return period is the average time span between tsunamis. Inside San Francisco Bay, tsunami waves will be significantly attenuated. The impact from a tsunami wave may temporarily raise the water levels in the lower-lying areas of the activity nodes. Given the rarity of such events and the relatively small rise in water levels that could be experienced along the western shorelines of the Bay, impact resulting from tsunamis are considered less-than-significant.

Building Structural Safety

The project area contains at least 348 vacant parcels, 79 vacant buildings, and 69 partially vacant buildings. As discussed in the draft Hunters Point Redevelopment Plan Amendment, prepared by the Agency, approximately 50.3 percent of the buildings within the Project Area (not including BIT or IBIP) are known to be in dilapidated or deteriorated condition, while the BIT area also contains dilapidated or deteriorated structures.

Some of these structures, as well as older unreinforced masonry buildings (UMBs), would generally have a higher risk of damage or collapse during an earthquake than newer buildings in

the Project Area, because their construction usually creates an unfavorable combination of stiffness, brittleness, and low tensile strength in key structural members.

San Francisco Ordinance 225-92 requires that most UMBs that have not been structurally upgraded to then-current seismic standards prior to May 21, 1973, be structurally upgraded to meet specified seismic safety standards. The City's program for UMB upgrades requires that privately owned UMBs be upgraded by 2006, with phased deadlines based on how serious a hazard they pose. A City and County of San Francisco loan program, funded by bonds approved in 1992, has been established to help UMB owners finance their upgrades. The upgrade program incorporates different standards for upgrades done to properties that do not undergo a change of use or other substantial alteration in connection with the upgrade.

Future alteration, renovation, or replacement of existing structures would not change the geological, soil, or seismic environment of the area. Because of the high ratio of older buildings in the Project Area and the high probability of major earthquakes on nearby active faults, seismically upgrading existing structures, or replacing them with new structures built to *San Francisco Building Code* standards, would improve the anticipated overall seismic performance of the Project Area, which would be considered a benefit of the Project.

Landslide Hazards

Areas with the greatest potential for landsliding are upland areas with steep slopes underlain by weathered bedrock or serpentine. Landslides are most likely to occur during periods of high rainfall when subsurface materials become saturated or due to earthquakes. Areas with the potential for landsliding in the Project Area have been mapped by the California Geological Survey (CGS, formerly California Division of Mines and Geology (CDMG)).¹⁸ As identified by the CGS, the upland areas of the Hunters Point Shoreline and the Candlestick Point Activity Nodes have slopes with the potential for landsliding. These areas include Hunters Point Hill in the Hunters Point Shoreline Activity Node, and Bayview Hill, which is adjacent to the Candlestick Point and South Basin Activity Nodes.

Approximately 380,000 square feet of new commercial and industrial construction in the Hunters Point Shoreline Activity Node could be developed as part of the Project. An additional 700

dwelling units could also be constructed in this activity node, not including additional units which could be constructed as part of the redevelopment of the Hunters Point Hill housing area. Much of this residential development could occur on upland areas with steep slopes underlain by weathered bedrock or serpentine. Development in these areas could expose people or structures to landslides. While no development is planned on upland areas within the Candlestick Point and South Basin Activity Node, development at the base of Bayview Hill could undermine the toe of the slope, potentially creating a landslide hazard that may pose a risk to people and structures. This is considered a less-than-significant impact because prior to issuance of any building permit for upland, hillside areas in the Hunters Point Shoreline and Candlestick Point Activity Nodes, a site-specific geotechnical study identifying landslide hazard-prone areas and engineering recommendations to mitigate potential risks shall be submitted to the DBI. Measures to reduce risk could include, but would not be limited to, flattening the slope and/or unloading the top of the slope, improving drainage, constructing retaining structures near the toe, and importing soil material.

Soils Hazards

Erosion

Erosion is caused by wind or water forces on bare, unprotected earth materials. Most of the Project Area is developed, except for some of the upland areas in the Hunters Point Shoreline and Candlestick Activity Nodes. Therefore, only the undeveloped upland areas in these activity nodes are most susceptible to the effects of erosion. Development could occur on upland areas in the Hunters Point Shoreline Activity Node as part of the Project; however, no development is proposed for the upland areas of the Candlestick Point Activity Node. The impacts from erosion in the Hunters Point Shoreline Activity Node could include increased sediment discharge to the San Francisco Bay, removal of surface soils, development of drainage gullies, and deposition of sediment in the existing drainage network. See Section III.M, Hydrology and Water Quality for a discussion of these impacts.

From a geotechnical perspective, erosion can be mitigated by typical construction methods such as restricting cut and fill slopes, terracing, installing storm drains, and landscaping, which would be

addressed in the site-specific geotechnical study required by the DBI as part of the building permit process. As a result, erosion impacts would be considered less than significant.

Damage from Settlement or Instability of Subsurface Materials

Unstable subsurface materials that occur in the Project Area include bedrock prone to landsliding, liquefiable sediments, expansive soils, and Bay Mud. Impacts from unstable subsurface materials may range from minor to severe. Portions of all seven activity nodes and the IBIP and BIT Redevelopment Areas contain artificial fill. As a result, development could be damaged by settlement or instability of the subsurface materials. However, project-specific development in the Project Area would be required to conform with the Uniform Building Code, which provides building standards designed to prevent damage resulting from settlement or unstable surface materials. For example, settlement or instability can be mitigated by such typical construction methods as pre-loading, deep foundations, and soil improvements. As a result, impacts related to settlement or unstable subsurface materials would be less than significant.

In addition, tidally influenced groundwater occurs at depths shallow enough to influence excavation, construction, operation, and stability of buildings and buried utilities. Dewatering would be necessary to maintain stable excavation conditions for foundation installation, and permanent dewatering may be needed to address seepage and the potential for settlement and subsidence. A final soils report required as a condition of the building permit process would address the potential for settlement and subsidence. The report would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Section 1701.2 of the *San Francisco Building Code*) be retained by the project sponsor to perform this monitoring. As discussed in more detail in Section III.K, Hazards and Hazardous Materials, any groundwater encountered during construction requiring disposal would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77). Therefore, the potential for damage to structures related to shallow groundwater conditions would be mitigated to less-than-significant since the DBI requires a geotechnical report and review of the building permit application pursuant to its implementation of the *Building Code*.

Asbestos

Asbestos is a naturally occurring mineral in serpentine rocks. The upland areas of the Northern Gateway and Hunters Point Shoreline Activity Nodes have surface outcroppings of serpentine. Construction-related excavation activities could cause asbestos-containing materials to become airborne, creating a potential impact to public health and safety. Development within these areas would be required to meet strict asbestos regulations of the BAAQMD, U.S. EPA, and federal and state OSHA for construction activities, as discussed in greater detail in Section III.K, Hazards and Hazardous Materials. Therefore, development within the Northern Gateway and Hunters Point Shoreline Activity Nodes as a result of the Project would have a less-than-significant impact related to asbestos exposure.

Corrosive Soils

Bay Mud is typically classified as ranging from slightly corrosive to moderately corrosive. The low-lying areas of all activity nodes are underlain by Bay Mud. Corrosive soils may affect foundations and subsurface utilities. However, development in these areas would be required to meet *Building Code* standards, which would mitigate the effects of corrosive soils for construction activities. For example, all buried iron, steel, cast iron, ductile iron, buried metallic pressure piping, galvanized steel, and dielectric coated steel or iron would be properly protected against corrosion depending upon the critical nature of the structure. As a result, development within the low-lying areas resulting from the Project would have a less-than-significant impact related to corrosive soils.

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- ⁹ Petersen, M. D., Bryant, W. A., Cramer, C. H., Cao, T., and Reichle, M. S., *Probabilistic Seismic Hazard Assessment for the State of California*, CDMG Open File Report 96-08; USGS Open File Report 96-706, 1996.
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- ¹² a) D. Borderdt, *et al.*, *Maximum Earthquake Intensity Predicted on a Regional Scale*, USGS, Miscellaneous Field Investigations Map MF-09, scale 1:125,000, 1975.
b) Davis, J.F., J.H. Bennett, G.A. Borchardt, J.E. Kahle, S.J. Rice, and M.A. Silva, *Earthquake planning scenario for a magnitude 8.3 earthquake on the San Andreas fault in the San Francisco Bay area*, California Geological Survey, Special Publication 61, 160 pages, 8 maps, scale 1:396,000, see maps and accompanying text on adjacent page, 1982.
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- ¹⁷ *California Building Code*, 2001 triennial edition of the California Code of Regulations, Title 24 (California Building Standards Code), effective date 1 November 2002.
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M. HYDROLOGY AND WATER QUALITY

This section describes the existing hydrology and water quality conditions of the Project Area and evaluates potential physical environmental effects related to combine sewer overflows, flooding, drainage, and groundwater and surface water quality. This section also presents applicable water quality regulations and regulatory agencies.

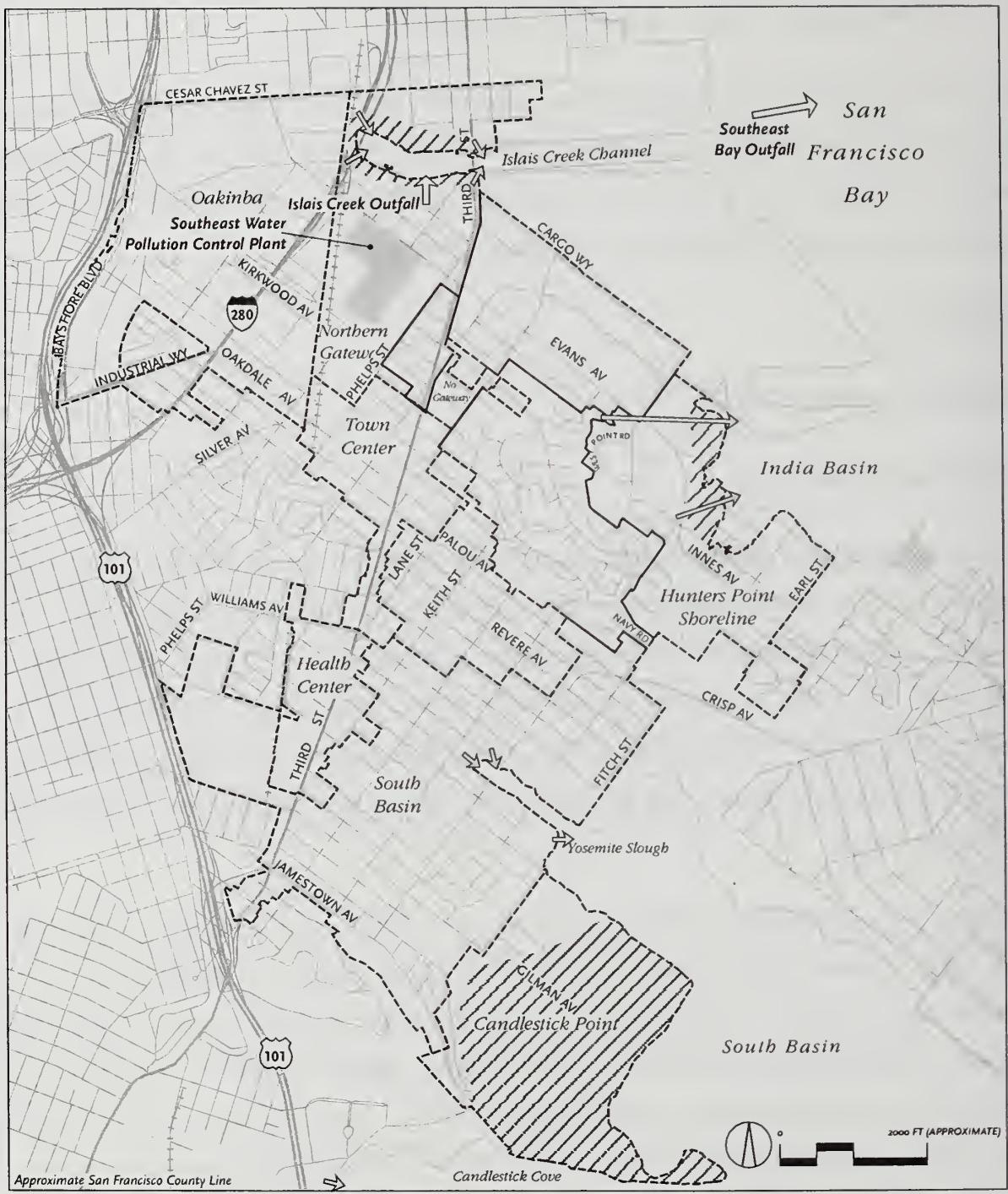
SETTING

EXISTING CONDITIONS

Water Features and Uses

There are currently no natural surface water bodies or streams in the Project Area, with the exception of the San Francisco Bay, which borders the east side of the Project Area. Historically, there were small creeks flowing from the east side of the City to the Bay, but most all of the creeks were filled during development of the City. Those areas of San Francisco Bay adjacent to the Project Area are referred to as the Central and Lower Bay. Average annual precipitation in the area is about 21 inches, which predominantly occurs from November to April.

Major water features along the Bay shoreline in the Project Area from north to south include Islais Creek Channel, India Basin, South Basin, Yosemite Slough, and Candlestick Cove, as shown in Figure III.M-1. These water features located in the Northern Gateway, South Basin, Hunters Point Shoreline, and Candlestick Point Activity Nodes are discussed in detail below. The waters are primarily used for navigation, boating, fishing, recreation, and industrial source waters. Freshwater flow into the southern reach of the central part of San Francisco Bay (Central Bay) is limited, unlike the northern reach of the Central Bay, where there is a constant mixing of freshwater from the Delta and saltwater from the ocean. The limited circulation and mixing of waters in the southern reach is governed mainly by tidal influence,



SOURCE: Orion

----- Project Area

⇒ Combined Sewer Outflows (CSOs) → Treated Wastewater Outfall Approximate Drainage Area with Separate Stormwater System

Bayview Hunters Point Redevelopment Plan EIR

FIGURE III.M-1 WATER FEATURES AND DRAINAGE FEATURES

though there is less tidal exchange in this portion of the Bay compared to the northern reach of the Central Bay near the Golden Gate. Circulation in confined areas, such as Yosemite Slough, is even more restricted.¹

Northern Gateway Activity Node

On the north side of the Project Area within the Northern Gateway Activity Node, Islais Creek Channel is a tidal inlet between Pier 80 and Pier 90 and is used for small-vessel boating and other non-contact water recreation. Historically, Islais Creek was the confluence of several small creeks (one of which is still extant in Glen Canyon) that carried runoff from the southeastern portion of San Francisco and entered the Bay just west of the western end of the existing tidal inlet.

Urban development and alterations to the drainage system resulted in culverting Islais Creek and channeling most of the stream flow into the combined sewer system (described below under Drainage). The creek channel is approximately 4,800 feet long and varies in width from 325 feet at the head on the western end to 650 feet at the mouth of the creek on the eastern end. The average depth is approximately 25 feet.² Currently, surface inflow to Islais Creek Channel occurs during the rainy season from treated wastewater discharged from the combined sewer system through the Quint Street outfall and four combined sewer outfall (CSO) structures along the creek channel, as well as from direct stormwater runoff from areas adjacent to the creek.

South Basin Activity Node

South Basin and Yosemite Slough are located adjacent to the South Basin and Candlestick Point Activity Nodes, with Hunters Point Shipyard to the north. Yosemite Slough has a wetland and tidal marsh area. Facilities and access at Candlestick Point State Recreation Area on the south side of South Basin promote extensive contact and non-contact water recreation. Windsurfing is popular at Candlestick Point, and there is a beach that offers access to the Bay for swimmers. The State Park constructed a boat launch area in 1997,³ and there are also two existing fishing piers. Currently, surface inflow into Yosemite Slough occurs during the rainy

season from treated wastewater discharged from the combined sewer system through three CSO structures and from direct stormwater runoff from areas adjacent to the basin and slough. Yosemite Slough flows into South Basin, and South Basin may also receive stormwater discharges from isolated separate sewer systems in the Hunters Point Shipyard.

Hunters Point Shoreline Activity Node

India Basin is located along the Hunters Point Shoreline Activity Node. Shoreline features at this basin include wetlands (a tidal marsh) at Pier 98, known as Herons Head Park, a small marina, and a shoreline park with public access to the Bay. Surface inflow into India Basin occurs during the rainy season from treated wastewater discharged from the combined sewer system through two CSO structures, from direct stormwater runoff from areas adjacent to the basin, and possibly from stormwater discharges from isolated separate sewer systems in a small part of this area.

Candlestick Point Activity Node

Candlestick Cove is located to the south of the Candlestick Point Activity Node. Historically, there were two small creeks flowing from the bedrock to the Bay in the vicinity of this activity node, but both creeks were filled during development of the City.⁴ This portion of the Bay receives surface drainage from one CSO structure as well as direct stormwater runoff and discharge from a separate stormwater system, as discussed below. The Bay shoreline in this activity node supports a fringe of wetland habitat, and clams, oysters, and other invertebrates are found along the shoreline.

Drainage

Freshwater flow to the Bay from the City, including most of the Project Area, has been almost entirely diverted to the City's combined sewer and stormwater system. The combined system collects and transports both sanitary sewage and stormwater runoff in the same set of pipes. Stormwater drainage from most of the Project Area is conveyed through the combined sewer system, treated, and eventually discharged to the Bay through outfalls and overflow structures

along the shoreline, as described below. In addition, areas immediately adjacent to the waterfront shoreline generally drain by sheetflow directly to the Bay.

However, there are some isolated areas along the waterfront in the Northern Gateway, Hunters Point Shoreline, and Candlestick Point Activity Nodes that possibly do not drain to the combined sewer system, but rather to separate stormwater systems that discharge directly to the Bay.⁵ The possible separate storm sewer systems located within the Northern Gateway and Hunters Point Shoreline Activity Nodes are under the jurisdiction of the Port of San Francisco (Port), and the San Francisco Recreation and Park Department, which operates the Candlestick Point stormwater system.

Combined Sewer System and Overflows

Wastewater flows from the east side of the City, including almost the entire Project Area, are transported to the Southeast Water Pollution Control Plant (SEWPCP), which is located within the Project Area on Phelps Street between Jerrold and Evans Avenues. This plant treats up to 150 million gallons per day (mgd) of sewage to a secondary level,⁶ and the annual average wastewater flow during dry weather is 65 to 70 mgd. During dry weather, wastewater flows consist mainly of municipal and industrial sanitary sewage and wastewater; all dry weather wastewater flow is treated to a secondary level at the SEWPCP. The treated wastewater is then discharged to the Bay through the deep water outfall at Pier 80, located north of the Project Area immediately to the north of the Islais Creek Channel.

During wet weather, the combined sewerage system collects large volumes of stormwater runoff in addition to municipal and industrial wastewater, and the combined wastewater and stormwater flow is conveyed to treatment facilities before eventual discharge to the Bay. Depending on the amount of rainfall, wet weather flows are treated to varying levels before discharge to the Bay. Up to 150 mgd of wet weather flows receive secondary treatment at the SEWPCP. The SEWPCP can also treat up to an additional 100 mgd to a primary treatment⁷ standard plus disinfection. Treated wet weather discharges from the SEWPCP occur through the Pier 80 outfall directly to the Bay or through the Quint Street outfall to Islais Creek Channel (in the north portion of the Project Area on the south bank of Islais Creek, one block

west of the Third Street bridge). Only wastewater treated to a secondary level is discharged at the Quint Street outfall.

Up to an additional 100 mgd of wet weather flows receive primary treatment plus disinfection at the North Point Wet Weather Facility, located on the north side of the City at 111 Bay Street, which operates only during wet weather. Treated effluent from this facility is discharged through four deep water outfalls, approximately 800 feet from the Bay shore and 18 feet below mean lower low water. Two of the deep water outfalls terminate at the end of Pier 33 and two terminate at the end of Pier 35 on the northeastern Bay shore, north of the Project Area.

The combined sewer system includes storage and transport boxes that, during wet weather, retain the combined stormwater and sewage flows that exceed the capacities of the SEWPCP and the North Point Wet Weather Facility for later treatment. When rainfall intensity results in combined flows that exceed the total capacity of the SEWPCP, North Point Facility, and the storage and transport structures, the excess flows are discharged through 29 CSO structures located along the City's Bayside waterfront from Fisherman's Wharf to Candlestick Point. Discharges from the CSO structures, consisting of about 6 percent sewage and 94 percent stormwater, receive "flow-through treatment," which is similar to primary treatment, to remove settleable solids and floatable materials. Wet weather flows are intermittent throughout the rainy season, and combined sewer overflow events vary in nature and duration depending largely on the intensity of individual rainstorms.

Within the Project Area, CSO structures are located in Islais Creek Channel, India Basin, Yosemite Slough (South Basin) and Candlestick Cove, as shown in Figure III.M-1. The seven activity nodes in the Project Area drain to four different sewer subdrainage basins, each associated with a different CSO discharge location. The Oakinba, Northern Gateway, and most of Town Center Activity Nodes, as well as the BIT, part of Hunters Point and IBIP areas, are located within the Islais Creek subdrainage basin, with CSOs discharging to Islais Creek Channel; CSOs in the Islais Creek subdrainage basin are designed to occur an average of ten times per year. Most of the Hunters Point Shoreline Activity Node and part of the Hunters Point area drains to the Mendell/Evans subdrainage basin, with CSOs discharging to

India Basin, where CSOs are designed to occur an average of once per year. The Health Center, South Basin and parts of Town Center Activity Nodes, as well as part of the Hunters Point Shoreline Activity Node, drain to the Yosemite subdrainage basin, with CSOs discharging to Yosemite Slough where CSOs are designed to occur an average of once per year. The Candlestick Point Activity Node drains to the Sunnydale subdrainage basin with CSOs discharging to Candlestick Cove, where CSOs are designed to occur an average of one time per year.

All discharges from the combined sewer system to the Bay, through either the outfalls or the CSO structures, are operated in compliance with the federal Clean Water Act and the State's Porter-Cologne Water Quality Control Act through permits issued by the California Regional Water Quality Control Board,⁸ San Francisco Bay Region (RWQCB).

The SFPUC Water Pollution Control Division manages the City's wastewater collection, treatment and disposal system. In 2004, the SFPUC initiated a comprehensive Clean Water Master Plan to develop a long-term strategy for the management of the City's wastewater and stormwater; to address system deficiencies, community impacts, public interests, and future needs; and to maximize system reliability and flexibility. In addition, in 2003, the SFPUC began updating the Recycled Water Master Plan. The Clean Water Master Plan and the Recycled Water Master Plan Update will examine the combined sewer system infrastructure and facilities as part of these related planning efforts.⁹

Isolated Separate Stormwater Drainage Systems

Isolated separate stormwater drainage systems are located within the jurisdiction of the Port, including small areas within the Project Area located along the perimeter of Islais Creek Channel and India Basin. Discharges to the Bay from these areas outside of the combined sewer system, shown on Figure III.M-1, are regulated under the statewide General Permit for Stormwater Discharges from Small Separate Storm Sewer Systems. Stormwater management activities are currently conducted by the Port, and are described below under Regulatory Framework.

In a portion of the Candlestick Point Activity Node, there is an isolated separate storm sewer system within the SFPUC jurisdiction. About 50 paved acres of the Candlestick Point Activity Node drain directly to the Bay through a separate storm sewer system serving the Candlestick Park Stadium and the Candlestick Point State Recreation Area. Stormwater runoff from this system is currently discharged to the Bay without undergoing any treatment. The stormwater system is more than 30 years old and is generally deficient in capacity; historic flooding has occurred due to the inadequate capacity of the system. All sanitary sewage from the Candlestick Point Activity Node is connected to the combined sewer system and is treated at the SEWPCP.

The San Francisco Recreation and Park Department is currently responsible for maintaining the separate storm drain system at Candlestick Point, including the catch basins surrounding the stadium, piping, pump stations, and outfalls. The SFPUC maintains the catch basins within the existing roadway. The Recreation and Park Department also contracts with the SFPUC on an as-needed basis to assist in the maintenance of the outfall system.

Groundwater

Parts of three groundwater basins underlie the Project Area: Islais Valley Basin, South Basin, and Visitacion Valley Basin. The three basins are separated by bedrock ridges, and the alluvial thickness ranges from zero feet where bedrock is exposed, to about 200 feet near the Bay. Bay mud occurs in a large portion of the basin, and artificial fill has been placed over the Bay margin. In general, the water table is shallow and the basic groundwater flow is eastward towards the Bay. Historically, there were numerous groundwater wells throughout these basins, but currently water supply service for the entire Project Area is provided by the SFPUC. Water quality of the groundwater is not known, but there are numerous sites with known hazardous waste contamination from current and previous land uses, primarily in the parts of the basin east of US 101. There are no plans for potable groundwater development within the Project Area.¹⁰

Water Quality Conditions

San Francisco Bay

Ambient offshore Bay water quality is not regularly monitored in the immediate vicinity of the Project Area. However, in 1993, the RWQCB initiated the Regional Monitoring Program for the San Francisco estuary for the general purposes of assessing regional water quality conditions and characterizing patterns and trends of contaminant concentrations and distribution in the water column, as well as identifying general sources of contamination to the Bay. The program has established a database of water quality and sediment quality in the estuary, particularly with regard to toxic and potentially toxic trace elements and organic contaminants. The most recent water quality data for the Central Bay,¹¹ the monitoring locations closest to the Project Area, was collected in 2002.¹² This data indicates that, with the exception of polychlorinated biphenyls (PCBs), water quality conditions remain well within water quality objectives established by the RWQCB for the parameters monitored. These parameters include conventional water quality parameters (ammonia, conductivity, dissolved oxygen, dissolved organic carbon, silicates, hardness, nitrate, nitrite, pH, phosphate, salinity, temperature, suspended solids, phaeophytin, and chlorophyll); trace elements (aluminum, arsenic, cadmium, cobalt, chromium, copper, iron, lead, manganese, mercury, methylmercury, nickel, selenium, silver, and zinc); trace organics including polynuclear aromatic hydrocarbons, PCBs, and pesticides; and toxicity.

Islais Creek

To assure that discharges of the treated wastewater did not adversely affect beneficial uses of the Bay and that water quality is protected, the Water Pollution Control Division (then part of the San Francisco Department of Public Works) collected periodic water quality samples from Islais Creek and Pier 80 from 1992 to 1994. Islais Creek and Pier 80 are located within and immediately to the north of the Project Area, respectively. The sampling was required as part of previous permit requirements (discussed below) for the SEWPCP. Eleven sampling events were conducted in 1992 and one sampling event was conducted each year in 1993 and 1994.

Samples were analyzed for salinity, conductivity, temperature, pH, dissolved oxygen, turbidity, coliform, and ammonia.

Over the course of the sampling periods, the data exhibited a range of values, reflecting a range in effluent and receiving water conditions. The most notable correlation in water quality data was the increase in coliform level with rainfall, which was likely due to the presence of partially treated sewage mixed with the rainfall in the CSO discharges to Islais Creek. As discussed previously, the combined sewer system at Islais Creek is designed for an average of ten CSO events per year, so elevated coliform levels do not indicate a permit violation.

REGULATORY FRAMEWORK

Water Quality Regulations

The federal Clean Water Act and subsequent amendments, under the enforcement authority of the U.S. EPA, was established “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. It gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industry. The Clean Water Act also set water quality standards for all contaminants in surface waters and made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions.

The federal Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) program to protect water quality of receiving waters. Under the Clean Water Act, Section 402, discharge of pollutants to receiving waters is prohibited unless the discharge is in compliance with an NPDES permit. In California, the USEPA has determined that the State’s water pollution control program had sufficient authority to manage the NPDES program under California law in a manner consistent with the Clean Water Act. Therefore, implementation and enforcement of the NPDES program is conducted through the California State Water Resources Control Board (SWRCB) and the nine RWQCBs.

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) regulates water quality within California and established the authority of the SWRCB and the nine RWQCBs. The San Francisco Bay waters are under the jurisdiction of the RWQCB (San Francisco Bay Region). The RWQCB established regulatory standards and objectives for water quality in the Bay in the *Water Quality Control Plan for the San Francisco Bay Basin*, commonly referred to as the “Basin Plan.”¹³ The Basin Plan identifies existing and potential beneficial uses and provides numerical and narrative water quality objectives designed to protect those uses.

Water Quality Criteria

The Clean Water Act established ambient water quality criteria for the protection of aquatic life and human health that serve as guidance for states to use in adopting water quality standards. In 1980, the USEPA published water quality criteria for 64 pollutants and pollutant classes and considered noncancer, cancer, and taste and odor effects. Additional criteria were adopted under the 1992 National Toxics Rule,¹⁴ and criteria specific to California were adopted under the 2000 California Toxics Rule. In 2002, the USEPA revised its recommended water quality criteria for 83 chemicals based on a revised methodology adopted in 2000 in order to protect human health. Human health criteria are based on the assumption that a person could eat fish and drink water from a water body, or only eat fish from a water body. The revisions incorporate new toxicity information on compounds and other changes in the calculation method. For many of the chemicals, including PCBs and dioxins, the water quality criteria are now lower (more stringent) than before. These changes have the potential to require more aggressive remedial measures at hazardous waste sites as well as more rigorous controls for wastewater dischargers. For others, such as methylmercury, USEPA uses a new type of water quality control which is likely to change how water body compliance is assessed. Additional revisions are planned.

Statewide measures to implement water quality criteria specified by the National Toxics Rule, the California Toxics Rule, and the Basin Plan are addressed in the SWRCB *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (referred to as the State Implementation Plan, or SIP), adopted by the SWRCB in

2000. The SIP provides a basis for establishing water quality-based effluent limitations for discharges to inland waters and methods for demonstrating compliance with these effluent limitations. In accordance with the SIP, the effluent limitations are enforced through NPDES permits, issuance or waiver of waste discharge requirements, or other relevant regulatory approaches. During the permit application or renewal process, the SIP is used to determine if (1) water quality-based effluent limits are required, and (2) if an effluent limit is required, the maximum allowable discharge concentration. The SIP does not apply to wet weather discharges from the combined sewer system, including combined sewer overflows, but does apply to dry weather discharges from the Pier 80 outfall.

Beneficial Uses

Applicable water quality criteria for a specific water body, specified by the National Toxics Rule or the California Toxics Rule, are determined on the basis of the beneficial use(s) of the water. The Basin Plan identifies the following existing beneficial uses for the San Francisco Bay, Central and Lower portions: ocean, commercial and sport fishing; estuarine habitat; industrial service supply; fish migration; navigation; preservation of rare and endangered species; water contact recreation; non-contact water recreation; shellfish harvesting; and wildlife habitat. The Central Bay is also identified as having industrial process supply and fish spawning as existing beneficial uses. No “potential” beneficial uses are identified for these waters.¹⁵

Impaired Water Bodies and Total Maximum Daily Loads

In accordance with Section 303(d) of the Clean Water Act, states must present the USEPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards. The RWQCB has listed Central and Lower Bay portions of the San Francisco Bay and Islais Creek as impaired water bodies. The pollutants that have been identified as causing impairment in the Central and Lower Bay portions of San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, furan compounds, mercury, exotic species, and PCBs.¹⁶ The Lower Bay is also listed for nickel, and the Central Bay is also listed for polynuclear aromatic hydrocarbons and selenium. Islais Creek is listed as an

impaired water body for ammonia, chlordane, dieldrin, endosulfan sulfate, hydrogen sulfide, polynuclear aromatic hydrocarbons, and PCBs; however, the listing of Islais Creek as an impaired water body is currently under consideration.

The law requires the development of actions, known as total maximum daily loads (TMDLs), to improve water quality of impaired water bodies. The first step of the TMDL process is development of a TMDL report describing the water quality problem addressed, detailing the pollutant sources, and outlining the solutions. An implementation plan, included in the TMDL report, describes how and when pollution prevention, control, or restoration activities will be accomplished and who will be responsible for these actions. The final step of the TMDL process is adopting and amending the Basin Plan to legally establish the TMDL and to specify regulatory requirements for compliance. As part of the Basin Plan Amendment, wasteload allocations are specified for entities that have permitted discharges.

The RWQCB has developed TMDL reports for PCBs and mercury^{17,18} and has proposed a Basin Plan amendment to incorporate the mercury TMDL¹⁹; the proposed mercury allocation for the SEWPCP is 2.27 kilograms per year. Current TMDL projects are ongoing for copper, nickel, and exotic species, and future projects are planned for diazinon, chlordane, dioxins, furans, and selenium.

NPDES Waste Discharge Regulations

The federal Clean Water Act, Section 402, established the NPDES program to protect water quality of receiving waters. The NPDES program requires all facilities which discharge pollutants into waters of the United States to obtain a permit. The permit provides two levels of control – technology-based limits and water-quality-based limits – to control discharge of pollutants for the protection of water quality. Technology-based limits are based on the ability of dischargers in the same category to treat wastewater, while water-quality based limits are required if technology-based limits are not sufficient to provide protection of the water body. Water quality-based effluent limitations required to meet water quality criteria in the receiving water are based on criteria specified in the National Toxics Rule, the California Toxics Rule,

and the Basin Plan. NPDES permits must also incorporate TMDL wasteload allocations when they are developed.

The regulations initially focused on municipal and industrial wastewater discharges in 1972, followed by stormwater discharge regulations, which became effective in November 1990. NPDES permits for wastewater and industrial discharges specify discharge prohibitions and effluent limitations and also include other provisions (such as monitoring and reporting programs) deemed necessary to protect water quality. In California, the SWRCB and the RWQCBs implement and enforce the NPDES program.

Southeast Plant, North Point, and Bayside Facilities NPDES Permit

The City currently holds an NPDES permit adopted by the RWQCB in June 2002 that covers the SEWPCP, the North Point Wet Weather Facility, and all of the Bayside wet-weather facilities, including discharges from the CSOs to the Bay.²⁰ The permit specifies discharge prohibitions, dry-weather effluent limitations, wet-weather effluent performance criteria, receiving water limitations, sludge management practices, and monitoring and reporting requirements. The permit prohibits overflows from the CSO structures during dry weather, and requires wet-weather overflows to comply with the nine minimum controls specified in the federal Combined Sewer Overflow Control Policy, described below.

Municipal Stormwater NPDES Permit

Between 1972 and 1990, NPDES regulations focused on municipal and industrial wastewater discharges. The 1987 amendments to the federal Clean Water Act added requirements for regulation of stormwater quality discharges under the NPDES program. In 1990, Phase I of the NPDES stormwater program was issued and addressed stormwater discharges from municipal separate storm sewer systems serving populations over 100,000 and industrial activities, including discharges from construction activities disturbing five acres or more. San Francisco was not subject to the Phase I requirements because of its combined sewer system, although certain areas within the Port of San Francisco were subject to and complied with permit requirements for industrial sites.

In 1999, NPDES Phase II regulations were issued, requiring stormwater discharge permits for municipalities not covered under Phase I as well as for construction activities disturbing over one acre. These Phase II stormwater regulations became effective in March 2003. In accordance with the Phase II stormwater regulations, those portions of San Francisco that are not served by the combined sewer system are subject to the requirements of the statewide General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems.²¹

The General Permit requires that small regulated municipal separate stormwater sewer systems (MS4s) develop and implement a Storm Water Management Plan (SWMP) that describes best management practices (BMPs), measurable goals, and timetables for implementation in six program areas. Together, these program areas address the six minimum control measures specified in the Phase II stormwater regulation. The six minimum control measures are:

1. Public Education
2. Public Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post Construction Stormwater Management
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The plans are required to reduce the discharge of pollutants from separate stormwater systems to the maximum extent practicable to protect water quality of receiving waters. Discharges are required to report annually on the progress of the SWMP.

The SFPUC and the Port have prepared two separate stormwater management plans that describe the framework for management of stormwater discharges to the small separate storm sewer systems within San Francisco for non-Port and Port jurisdictions, respectively, in accordance with Phase II stormwater regulations.^{22,23} Although the SFPUC and Port administer their stormwater programs separately, the two jurisdictions coordinate related activities, including CEQA guidance for post-construction controls development, recycled water use, and regulatory compliance.

The plans are designed to reduce the discharge of pollutants from the City's separate storm sewer systems to the maximum extent practicable and to protect water quality in San Francisco Bay. Any development resulting from the Project within an area served by a separate storm sewer system under Port jurisdiction (includes small areas near Islais Creek Channel and India Basin) would be subject to the Port stormwater management plan. Similarly, any development resulting from the Project with separate sewer systems under SFPUC jurisdiction would be subject to the SFPUC stormwater management plan (SWMP). The separate storm sewer system at Candlestick Point is not currently included in the SFPUC SWMP, but the plan will be updated by the SFPUC to include this system.²⁴

Federal Combined Sewer Overflow Control Policy

On April 11, 1994 the USEPA adopted the Combined Sewer Overflow Control Policy (CSO Control Policy), which became part of the Clean Water Act in December 2000. This policy establishes a consistent national approach for controlling discharges from combined sewers to the nation's water. Using the NPDES permit program, the policy initiates a two-phased process with higher priority given to more environmentally sensitive areas. During the first phase, the permittee is required to implement the following nine minimum controls that constitute the technology-based requirements of the Clean Water Act and can reduce the frequency of CSOs and their effects on receiving water quality:

1. Conduct proper operation and regular maintenance programs for the combined sewer system and CSO outfalls;
2. Maximize the use of the collection system for storage;
3. Review and modify pretreatment programs to ensure that CSO impacts are minimized;
4. Maximize flow to the treatment plant for treatment;
5. Prohibit CSOs during dry weather;
6. Control solids and floatable materials in CSOs;
7. Develop and implement pollution prevention programs that focus on contaminant reduction activities;
8. Notify the public; and

9. Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.

The City is currently implementing these controls as required by the CSO Control Policy. This includes development of a Water Pollution Prevention Program which focuses on minimizing pollutants from entering the City's combined sewer system and addresses pollutants from residential, commercial, industrial, and nonpoint pollutant sources.

During the second phase, the permittee is required to continue implementation of the nine minimum controls, properly operate and maintain the completed CSO controls in accordance with the operational plan, and implement the post-construction monitoring program. In conformance with the CSO Control Policy, the City has developed a long-term control plan to select CSO controls to comply with water quality criteria and to protect the beneficial uses of the receiving waters. The plan utilizes the presumptive approach for the protection of water quality. In accordance with the CSO Control Policy, this approach must meet one of these criteria:

- An average of four CSO events per year;
- Elimination or capture no less than 85 percent by volume of the combined sewage collected in the combined sewer system during precipitation events on a system-wide average basis; or
- Removal of the mass of any contaminant causing water quality impairment that would be otherwise removed by eliminating or capturing the flow as specified above.

The CSO Control Policy requires that any CSOs that occur after implementation of the nine minimum control measures should receive a minimum of primary clarification (removal of floatables and settleable solids), solids and floatable disposal, and disinfection (if necessary to meet water quality standards and protect the beneficial uses of the receiving water). The San Francisco Wastewater Control Program exceeds the specifications of the presumptive approach because 100 percent of the combined sewer flows are captured and treated rather than the required 85 percent. As defined in the CSO Control Policy, San Francisco has no remaining untreated overflow events because the overflows that occur in San Francisco currently receive the equivalent of primary treatment within the storage/transport boxes, consisting of removal of floatables and settleable solids.

The City is currently in full compliance with the CSO Control Policy. In 1997, the City completed construction of a 20-year, \$1.6 billion Wastewater Master Plan which included extensive storage, transport and treatment upgrades to the combined sewer system that meet approved design criteria for overall protection of beneficial uses. Operation and implementation of these facilities satisfies the CSO Control Policy, including maximizing use of the system during wet weather.

Industrial Wastewater Permitting Regulations

The Clean Water Act requires that publicly owned treatment works regulate the discharge of industrial wastes into a sewerage system subject to an NPDES permit. Accordingly, the City has adopted detailed permit requirements for industrial dischargers. The discharge of any wastewater to the combined sewer system would be subject to the requirements of Article 4.1 of the *San Francisco Public Works Code*, which regulates the quantity and quality of discharges to the combined sewer system. Order No. 158170 of the San Francisco Public Works Department provides additional industrial waste discharge limits to augment those listed in Article 4.1 of the *San Francisco Public Works Code*.

In accordance with Article 4.1, industrial discharges would be required to obtain a discharge permit from the City to discharge industrial wastewater to the combined sewer system. The discharge would be required to meet specified discharge limitations, and would be prohibited from discharging other materials that could obstruct or damage the sewer system; could cause a nuisance; could interfere with the operation, maintenance, or repair of the sewer system; or would directly or indirectly cause a violation of the City's federal or state sewage discharge permit. Industrial sites that would discharge wastewater to the combined sewer system would be subject to the requirements of Article 4.1 and Order No. 158170.

Industrial Stormwater Management Requirements

Requirements for industrial stormwater management within the Project Area would vary depending on the location of the facility. Industrial stormwater discharges to the combined sewer system would be subject to the requirements of the City's NPDES permit and the

federal CSO Control Policy. Industrial stormwater discharges, if any, to a separate stormwater system such as the Candlestick Point storm sewer system or a system under the jurisdiction of the Port, or from those sites that would drain directly to the Bay, would be subject to the General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit), described below.

Pollution Prevention Program for Areas Served by the Combined Sewer System

Discharges of stormwater runoff to the combined sewer system from industrial uses within Bayview Hunters Point are subject to the permit requirements specified in Article 4.1 of the *San Francisco Public Works Code* and supplemented by Order No. 158170. The permit requirements include compliance with the federal CSO Control Policy minimum controls, including development and implementation of a pollution prevention program. The San Francisco pollution prevention program includes requirements for best management practices to minimize the amount of pollutants carried by stormwater to the combined sewer system from industrial uses, and the City conducts periodic inspections to ensure compliance.

General Industrial Stormwater NPDES Permit for Areas Not Served by the Combined Sewer System

The federal Clean Water Act includes regulations requiring that point source discharges²⁵ of stormwater from specified types of industrial and commercial operations that discharge either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.²⁶ Stormwater discharges from specified industrial uses in Candlestick Point that do not drain to the combined sewer system or any areas that drain to separate stormwater system under the jurisdiction of the Port or directly to the Bay would need to comply with the Industrial General Permit, adopted by the SWRCB in 1997.

In accordance with the Industrial General Permit, each industrial user is individually required to comply with all stormwater permitting requirements including submittal of a Notice of Intent and preparation of a Stormwater Pollution Prevention Plan (SWPPP) identifying sources of pollutants and specifying BMPs to control pollution in stormwater discharges. Each individual industrial user is also required to prepare a monitoring plan to demonstrate that any

stormwater discharges are within effluent limitations of the Industrial General Permit, and to monitor the performance of BMPs implemented for pollution control. Under this permit, a discharger may also participate in an approved group monitoring plan.

Stormwater discharges from the Port's maintenance facility and industrial tenants comply with the Industrial General Permit. To facilitate compliance, the Port established its Group Storm Water Monitoring Program in 1993 and has assumed responsibility for conducting stormwater sampling and analysis and annual reporting of the results.²⁷ The individual tenants have the responsibility for visually inspecting their facilities and stormwater discharges and submitting annual reports to the RWQCB with copies to the Port. The Port also reviews each tenant's SWPPP and performs inspections at each facility to confirm implementation of BMPs.

The SWRCB has prepared a proposed draft of the Industrial General Permit that includes numerous revisions to the 1997 permit.²⁸ These changes include modifications to the SWPPP section, the monitoring program, and group monitoring requirements. Under the 1997 permit, light industry was excluded from coverage if there was no exposure of industrial materials to stormwater. Under the new permit, these facilities would not be automatically excluded from coverage but would need to apply for a Conditional Exclusion. To obtain this exclusion, dischargers must submit a certification for a Conditional Exclusion to demonstrate that there would be no contact of pollutants with stormwater.

Construction Stormwater Management Requirements

Requirements for construction stormwater management within the Project Area would vary depending on the location of the facility. Construction stormwater discharges to the combined sewer system would be subject to the requirements of the City's NPDES permit and the federal CSO Control Policy. Construction stormwater discharges to the Candlestick Point separate storm sewer system or a separate storm sewer system under Port jurisdiction, or those sites that would drain directly to the Bay, would be subject to the statewide General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit), described below.

Erosion Control Plan for Areas Served by the Combined Sewer System

For sites served by the combined sewer system, construction stormwater discharges would be subject to the requirements of Article 4.1 of the *San Francisco Public Works Code*, which incorporates and implements the City's NPDES permit and the nine minimum controls described in the federal CSO Control Policy. The minimum controls include development and implementation of a pollution prevention program. At a minimum, the City requires that the project sponsor develop and implement an erosion and sediment control plan to reduce the impact of runoff from the construction site. The erosion and sediment control plan must be reviewed and approved by the City prior to implementation, and the City conducts period inspections to ensure compliance with the erosion and sediment control plan.

General Construction Permit for Areas Not Served by the Combined Sewer System

The federal Clean Water Act effectively prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California and has adopted a General Construction Permit that encompasses one or more acres of soil disturbance.²⁹ The current 1999 General Construction Permit updates the previous 1992 General Construction Permit. In accordance with this permit, construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale, must comply with the General Construction Permit. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Construction projects located in Candlestick Point or in an area served by a separate storm sewer system under Port jurisdiction, or areas that drain directly to the Bay that disturb one or more acre of soil or are part of a larger development project, would be required to comply with this permit.

In general, the NPDES stormwater permitting requirements for construction activities require that the landowner and/or contractor submit a Notice of Intent and develop and implement a SWPPP. The SWPPP includes a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points,

general topography both before and after construction, and drainage patterns across the site. The SWPPP must also specify BMPs that will be used to protect stormwater runoff and the placement of those BMPs; a visual monitoring program; a chemical monitoring program for nonvisible pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed as an impaired water body for sediment. Measures for erosion and sediment controls, construction waste handling and disposal, and post-construction erosion and sediment control should also be addressed along with methods to eliminate or reduce non-stormwater discharges to receiving waters.

Construction Stormwater NPDES Permit for Small Linear Projects in Areas Not Served by the Combined Sewer System

The SWRCB considers certain projects involving the installation of underground and overhead utilities, such as installation of infrastructure, as small linear underground/overhead projects (referred to as small LUPs). Construction activities required for these projects have a lower potential to affect water quality via runoff from than traditional construction projects because the projects are typically shorter in duration and constructed within or around hard paved surfaces, resulting in minimal disturbed land area being exposed at the close of the construction day. To simplify the stormwater permitting process for these projects, the SWRCB has issued a statewide General Permit for Storm Water Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects (LUP General Permit) for small LUPs that disturb more than one acre but less than five acres of land.³⁰ The LUP General Permit covers projects associated with private or municipal development projects such as those operated by the LUP owner or operator to relocate facilities in advance of pending developments or redevelopments or to provide new facilities.

Under the LUP General Permit the owner/operator must submit the required notices; prepare a SWPPP specifying BMPs to control and reduce discharges of pollutants associated with construction in stormwater runoff into storm drains and receiving waters; eliminate or reduce non-stormwater discharges to the storm sewers and receiving waters; and monitor the construction site to ensure that all BMPs are implemented, maintained, and effective. Permit requirements, such as the notification requirements, minimum SWPPP elements, and the

amount and degree of monitoring, vary depending on the complexity of the small LUP. Small LUP construction projects within an area served by a separate storm sewer system or an area that drains directly to the Bay would be subject to the requirements of this permit.

Regulations Pertaining to Construction in Waters of the United States

Development within streambeds and other “waters of the United States,” including wetlands, is regulated by federal and state agencies. Construction of a new bridge such as one across Yosemite Slough or South Basin would be subject to these regulations. The agencies with jurisdiction over activities that can affect water quality and drainage patterns and their authorities include:

- The U.S. Army Corps of Engineers has jurisdiction over projects involving the “waters of the United States” and reviews projects involving construction in either creeks or wetland areas that are under jurisdiction of Section 404 of the Clean Water Act, and in some cases may require a permit for such activities. The Corps also has jurisdiction over fill, dredging, and disposal of dredge spoils under Section 10 of the Rivers and Harbor Act and Section 404 of the Clean Water Act.
- The California Department of Fish and Game has jurisdiction over any activity that could affect the bank or bed of any stream that has value to fish and wildlife. If any changes are proposed along a creek or waterway within their jurisdiction, a Stream Bed Alteration Agreement is required under Fish and Game Code Sections 1601 and 1603.
- The RWQCB has jurisdiction over projects located adjacent to or in the Bay or in a waterway with a defined bed. Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act provide the SWRCB and the RWQCBs with the regulatory authority to waive, certify, or deny any proposed federally permitted activity, which could result in a discharge to surface waters of the state. To waive or certify an activity that agencies must find that the proposed discharge will comply with state water quality standards. If these agencies deny the proposed activity, the federal permit cannot be issued.
- The BCDC has jurisdiction over any projects requiring dredging or filling within 100 feet of the Bay. Projects within this shoreline band are required to obtain a permit from BCDC to prevent unnecessary filling of the Bay and to promote public access to the Bay. Water quality certification by the RWQCB is also a requirement for granting a permit from the BCDC.

IMPACTS

SIGNIFICANCE CRITERIA

Implementation of the Project would have a significant effect on hydrology and water quality if it were to:

- Substantially alter existing drainage patterns or increase the rate and/or amount of surface water runoff;
- Substantially degrade water quality;
- Degrade a potential or existing potable water supply;
- Substantially degrade or deplete groundwater resources or interfere with groundwater recharge; or
- Cause substantial flooding, erosion, or siltation.

Criteria for evaluating surface and groundwater quality in the San Francisco Bay Area are based on beneficial uses and water quality objectives established by the San Francisco Bay RWQCB as authorized under the Porter-Cologne Water Quality Control Act and the Clean Water Act. Both beneficial uses and water quality objectives are described within the Basin Plan. Criteria for evaluating flooding hazards are based on effects to on-site and downstream 100-year flood zones as established by the Federal Emergency Management Agency (FEMA).

The project effects section that follows does not discuss impacts to potable water supply, groundwater resources or flooding because the Project would not result in impacts in these areas for the following reasons: Potable water supply is not an issue because the Project would be served by an existing water supply (discussed under Utilities) and is not located within a potable water supply watershed or over a potable groundwater aquifer. Groundwater resources or groundwater recharge are not issues because the Project would result in negligible effects to groundwater. Groundwater dewatering may be required for construction of specific redevelopment projects; in the future however, this temporary dewatering would not substantially affect groundwater resources, and discharge of any groundwater produced by dewatering to the sewer system would be regulated by a permit from the City, as discussed in the Setting. Further, groundwater is not used or planned as a potable water supply in this part

of San Francisco. Flooding hazards are not an issue because, with the possible exception of flooding due to inadequate sewer capacity, the Project Area is not subject to flooding and the Project would have no impacts on flooding. Therefore none of these impacts are discussed further.

PROGRAM EFFECTS

Long Term Impact to Combined Sewer Overflows

Two aspects of the Project could result in long term changes to the wastewater flows to the City's combined sewer system: (1) new development would increase sanitary sewage flows year-round to the combined sewer system, and (2) increased landscaping and decreased impervious surfaces would decrease the volume of stormwater runoff to the combined sewer system. The effects of both factors on the combined sewer system are closely related, and the combined effect of both factors could indirectly result in increased volume and/or frequency of discharges to the Bay. An increase in volume of CSO discharges could affect water quality and could be considered a potentially significant water quality impact due to the potential to degrade water quality. However, this potential impact must be evaluated in context of the City's compliance with existing regulatory requirements and ongoing planning efforts addressing long term protection of water quality and beneficial uses of San Francisco Bay. The two factors are first discussed separately, followed by a discussion of the combined impacts.

Changes in Sanitary Sewage Flows

The Project would result in programs, activities and zoning changes that would encourage and promote a wide variety of new development throughout the Project Area. When implemented, the new development would result in an intensification of land uses and an associated increase in sanitary sewage generated by new residents, employees and associated land uses in the Project Area. For the purposes of this analysis, a conservative approach will be taken which assumes that as a worst-case scenario that all sanitary sewage from any new development or re-development would result in a year-round increase in wastewater volume requiring treatment and disposal in the City's combined sewer system.

During dry weather (typically May 1 to October 15), all sanitary sewage generated in the Project Area would be treated at the SEWPCP. The SEWPCP is currently operating at about 80 percent of its design capacity and treats all dry weather flow from the entire eastside of the City (about two thirds of the City's area) to a secondary level prior to discharge through outfalls to the Bay. The additional dry weather flow associated with implementation of the Project would be a negligible incremental increase to the existing dry weather flow and could be accommodated within the system's existing capacity.

During wet weather (typically October 16 to April 30), however, there is a wide variation in volume of wet weather flow due to the addition of stormwater, and the combined sewer system is operated under a wet weather mode different from dry weather operations. The volume of wet weather flows is directly related to the rainfall intensity, and treatment of the wet weather flows varies depending on the characteristics of any individual rainstorm. The combined system is designed and permitted to handle a wide range of wet weather flows. During periods of intense rainfall, the combined sewer system is designed to discharge treated overflows through the CSO structures to the Bay, including ten CSO structures in the Project Area (see Setting).

While the system is in compliance with current regulations and permits, overflow frequencies in the Project Area have on occasion exceeded the system's design targets in recent years.³¹ Although the total increase in sanitary sewage generated as a result of implementation of the Project could be accommodated within the existing system's operating capacity and permitted discharges, the incremental increase of sanitary sewage during wet weather would affect the overall system's wet weather operations. This increase in sanitary sewage could cumulatively contribute to an increase in average volume of CSO discharges to the Bay in the Project Area. An increase in the volume of CSO discharges could be a concern because the RWQCB has designated this portion of the Bay as an impaired water body under Section 303(d) of the Clean Water Act, which indicates water quality standards are not expected to be met after implementation of technology-based effluent limitations, and because CSO discharges contain pollutants for which the Bay is impaired; however, the ongoing TMDL process (described in the Setting) is designed to improve water quality of impaired water bodies.

Changes in Stormwater Runoff

Stormwater runoff in an urban location such as the Project Area is a known source of pollution. As described in the Setting, nearly all of the Project Area is served by the combined sewer system, so that stormwater runoff from these areas flow to the combined sewer system where it is captured and treated to varying degrees, depending on the characteristics of individual rainstorms. Impacts associated with stormwater runoff generated within the areas served by the combined sewer system are discussed in this section, and impacts associated with stormwater runoff generated in areas with separate sewer systems or in areas that drain directly to the Bay are discussed under the next impact, Changes in Drainage in Areas Not Served by the Combined Sewer System.

Runoff from new development and redevelopment projects may contain many types of pollutants including polynuclear aromatic hydrocarbons from vehicle emissions; heavy metals such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; mercury resulting from atmospheric deposition. All of these materials, and others, may be deposited on paved surfaces and roof-tops as fine airborne particles, thus yielding storm water runoff pollution that is unrelated to the particular activity or use associated with a given new or redevelopment project. In addition, individual development projects could contribute specific pollutants including car maintenance wastes, pesticides, household hazardous wastes, pet wastes, and trash which can be washed into the combined sewer system. These pollutants can all affect water quality.

However, the Project would include community enhancement programs and design guidelines, such as Streetscape Plans, Green Streets and Framework Open Space programs, that would promote increased landscaping, street trees and open space. These programs focus on areas located in the areas served by the combined sewer system, including Third Street, Evans/Innes, Carroll, Mendell, Oakdale, and the Town Center block. If these programs were to result in the replacement of paved areas or structures with landscaping, trees, community gardens or other pervious surfaces and/or other stormwater BMP's, then there would be an increase in infiltration of rainwater into the ground and an associated decrease in the volume of stormwater runoff flowing to the combined sewer system. Depending on how these

enhancement programs are implemented, this would indirectly be a beneficial impact of the Project. However, neither the details of these enhancement programs, the site design measures, nor the extent of such improvements are known at this time.

Therefore, for the purposes of this analysis, a conservative approach will be taken which assumes that as a worst-case scenario, the volume of stormwater runoff draining to the combined sewer system would remain the same if the Project is implemented.

Regulations and Policies Governing CSO Discharges

Under the Project, all discharges from the combined sewer system to the Bay, through either the outfalls or the CSO structures, will continue to operate in compliance with a NPDES permit from the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). This permit implements the plans, policies and provisions of the Basin Plan (see Setting). The current permit states that the City's combined sewer system is regulated under the federal CSO Control Policy, and the RWQCB has determined that the current design and operation of the wet weather facilities satisfy the CSO Control Policy requirements. Under this policy, the City must operate the combined sewer system to maximize treatment of wet weather flows and to minimize combined sewer overflows. Compliance is based on implementation of nine minimum controls specified in the CSO Control Policy and implementation of the long term control plan, which includes both construction of the system (already completed) and appropriate operations of the system. The permit acknowledges that some years have more intense rainstorms than others and that there may be times when there is more flow than anticipated in the system design criteria.

The City is currently implementing the nine minimum controls as required by the CSO Control Policy (see Setting for full list). Any development in the Project Area resulting from implementation of the Project would require coordination with the SFPUC to ensure that the City continues to remain in full compliance with all aspects of the nine minimum controls. Specifically, the following two controls could apply to specific developments:

- Review and modify pretreatment programs to ensure that CSOs are minimized; and

- Develop and implement pollution prevention programs that focus on contaminant reduction activities.

These two control aspects of the CSO Control Policy are implemented by the SFPUC. When individual developments are proposed under the Project, the Project Sponsor would be required to coordinate with the SFPUC to ensure that the developments are in compliance with ongoing, existing pretreatment and pollution prevention programs.

Pretreatment Programs. The purposes of the pretreatment programs include protecting the sewerage system and treatment plant from upsets, interference and pass through. The programs include permit requirements for industrial dischargers, who are subject to the requirements of the Sewer Use Ordinance, Article 4.1 of the San Francisco Public Works Code. This ordinance regulates the quantity and quality of discharges to the combined sewer system and is augmented by Order No. 158170 of the San Francisco Public Works Department which provides additional numerical industrial waste discharge limits. Activities included under the pretreatment programs include industrial use inspections and pretreatment monitoring.³² Any new industrial uses resulting from implementation of the Project would be subject to the specifications of the Sewer Use Ordinance, associated orders, and all pretreatment requirements.

Pollution Prevention Programs. The goal of the Water Pollution Prevention Program is to prevent pollutants from entering the City's combined sewer system, and the program addresses pollutants from residential, commercial, industrial and nonpoint pollutant sources. Water pollution prevention strategies implemented in accordance with this program minimize pollutant loading into the combined sewer system, thereby decreasing the potential for violating discharge limits and also decreasing the City's reliance on treatment technologies as a means to reduce pollutant loads.³³

The pollutants of concern addressed by the Water Pollution Prevention Program include fats, oil, and grease; mercury; copper, organophosphorous pesticides; and dioxin. Each of these pollutants is listed either because it affects performance of the combined sewer system, is identified as a potential pollutant as a result of analyses conducted in support of the NPDES permit, is listed as a pollutant in the Basin Plan or the California Toxics Rule, or is listed as a

pollutant causing water quality impairment of the San Francisco Bay as defined in Section 303(d) of the Clean Water Act.

The Water Pollution Prevention Program includes plans to reduce or prevent these pollutants from entering the combined sewer system and to control nonpoint sources of pollution. These plans rely primarily on public education, outreach, and technical assistance methods to reduce pollutant loading into the combined sewer system at the source. Additional Pollution Prevention Programs include: used motor oil program, street cleaning efforts, environmental education, green business program, stormwater program, catch basin stenciling, and miscellaneous public outreach activities.

As individual projects in the Project Area are developed, the Project Sponsor would be required to coordinate with SFPUC to ensure that these new developments would actively participate in and be in compliance with appropriate pre-treatment and pollution prevention programs, which would in turn ensure compliance with the NPDES permit requirements and the federal CSO Control Policy.

Planning Efforts Affecting CSO Discharges

The City is currently conducting on-going planning efforts that address CSO discharges and associated water quality impacts and may directly or indirectly affect new developments resulting from implementation of the Project. Three of these planning efforts are discussed below: Clean Water Program New and Redevelopment Guidelines, Clean Water Master Plan, and Recycled Water Master Plan Update.

Clean Water Program New Development and Redevelopment Guidelines

The SFPUC is currently preparing sewage and stormwater management guidelines for new developments and major redevelopments within San Francisco to augment existing utility infrastructure requirements. The goal of this effort is to develop a systematic, citywide approach for planning stormwater management systems and to ensure that proposed developments will provide a high level of service with the City's continued compliance with water quality regulations and protection of beneficial uses in San Francisco Bay and the ocean.

These guidelines will outline stormwater control measures required in areas of the City served by a separate sewer system, and will also recommend stormwater control measures feasible for implementing in areas of the City served by the combined sewer system.³⁴ The guidelines are being developed as part of the compliance strategy for the City's existing Phase II stormwater permit.

Stormwater management would occur in three phases: site design, source control and structural treatment controls. The first two phases aim to either reduce the quantity of stormwater transported to the combined sewer system or to prevent stormwater pollutants from entering the runoff stream. The third phase aims to improve the quality of runoff generated as well as to reduce the quantity. Although these guidelines have not yet been adopted, early consideration of these measures as part of the planning process for the Project would lay the foundation for and facilitate inclusion of these measures in future development projects. The proposed guidelines similar practice being initiated by other communities throughout the Bay Area.

The initial phase of stormwater management would be directed at site design, which focuses on the importance of managing stormwater runoff during the planning and design of a project. It requires appropriate consideration when planning the layout and character of a development project. Site design for stormwater management requires a water sensitive approach to development layouts. The primary goal is to reduce the volume of stormwater runoff transported to the combined sewer system by each individual project, or in other words, to retain stormwater on site to the extent feasible and to enhance on-site infiltration. During design of individual projects, there are several site design guides available to the Project Sponsor and developers such as "Start at the Source" and "Green Streets."³⁵ Examples of site planning and design concepts that could be applied to individual development projects in the Project Area include such measures as minimizing directly connected impervious areas, maximizing permeability by preserving open space and by using permeable pavement surfaces where feasible, minimizing paved surfaces at private residences (e.g., smaller driveways), and requiring tree planting along streets.

The second phase of stormwater management is consideration of source control, a broad ranging term that encompasses education programs, regular maintenance and upkeep of sites, and careful design of specific areas that may contribute excessively to pollution and/or volume loadings. Source control aims to minimize the amount of pollution entering the sewage system and is based on the premise that it is generally easier and more cost-effective to control pollution at the source rather than to remove pollution from within the sewage system. Table E.1 in Appendix E lists a range of source control BMPs that could be applied to projects within the Project Area. The existing Pretreatment and Pollution Prevention Programs described above also includes a stormwater component that addresses some of these source control measures.

The final phase of stormwater management focuses on structural treatment controls, referred to as BMPs, that improve the quality of, as well as minimize the quantity of, runoff transported to the combined sewer system. Stormwater BMPs can be generally classified in the following categories:

- Infiltration - Infiltrate runoff into the soil;
- Detention and settling - Retain runoff for later release with the detention providing treatment;
- Biofiltration - Convey runoff slowly through vegetation filters;
- Filtration - Convey runoff slowly through media filters;
- Flow through separators - Convey runoff through various separation treatment technologies;
- Wetlands/Wetponds - Promote enhanced sedimentation and filtration, biological uptake, and adsorption onto sediments; and
- Any combination thereof, also referred to as the treatment train approach.

Some specific examples of stormwater treatment control BMPs that could be applied to the Project are listed in Table E.2 in Appendix E. While these treatment controls are generally implemented on a larger scale than any one individual development project, there may be opportunities within the 1,721-acre Project Area to incorporate treatment controls BMPs in the overall planning process.

Coordination of the New Development Guidelines with the Project and future incorporation of its recommendations into specific development projects would be a beneficial water quality impact.

Clean Water Master Plan

In 2004, the SFPUC began project development of the Clean Water Master Plan, which will lead to the development of a Clean Water Facilities Plan and a Clean Water Financial Plan. The Clean Water Master Plan will address the City's long-term vision and strategy for the management of San Francisco's wastewater and stormwater. Identified tasks to be conducted during the planning and engineering phase include identifying and evaluating alternatives to: (1) resolve flooding problems and hydraulic deficiencies; (2) reduce and/or disinfect combined sewer overflows in the Bay and Ocean; (3) redirect treated effluent discharges from the Bay to the Ocean; (4) maximize water conservation and reuse opportunities; (5) implement a more decentralized wastewater treatment approach; (6) separate sections of the City's combined sewer system into a separate sewer system; (7) eliminate/minimize odors at treatment facilities and in the collection system; (8) address biosolids issues; and (9) incorporate innovative and environmentally-beneficial technologies. The Clean Water Master Plan will be required to undergo separate environmental review under CEQA.

Although the Clean Water Master Plan is in the early planning stages, there are long-term implications that may affect the Project with respect to wastewater and stormwater management of individual development projects. In addition to addressing CSO discharges, the Clean Water Master Plan would also address sanitary sewage from areas within the Project Area not currently served by the combined sewer system, such as areas in the Hunters Point Shoreline Activity Node along the India Basin shoreline. If future development is proposed in these areas, the Clean Water Master Plan would be the basis for determining the appropriate approach for collection, treatment and disposal of sanitary sewage. If the Project is implemented, the Project Sponsor would maintain on-going coordination with the SFPUC to determine the status of the Clean Water Master Plan and applicability to development projects within the Project Area.

Recycled Water Master Plan Update

The SFPUC established a recycled water program in the early 1990s and is currently preparing a Recycled Water Master Plan Update. Recycled water is highly treated wastewater that can safely be used for non-drinking applications, such as irrigation, vehicle or facilities washdown, and industrial cooling water. The purpose of the plan is to provide guidance on the development of recycled water as an alternative water supply source. Use of recycled water can preserve use of high quality potable water for drinking water. One of the major benefits of water recycling is that it would reduce loading to the City's combined sewer system, thereby reducing ultimate discharges to the Bay and Ocean.

Background studies for the Recycled Water Master Plan Update have indicated that there is potential for recycled water use in the City. If recycled water projects are proposed on the eastside of the City, they would affect wastewater management in the Project Area, since the SEWPCP is located within this area and portions of the Project Area are subject to the Recycled Water Ordinance. Article 22 of the San Francisco Public Works Code, known as the Recycled Water Ordinance, requires dual plumbing system installation within identified non-potable water use areas and use of recycled water when it is available. Dual plumbing is a separate set of pipes installed and coded specifically for recycled water use, and there are strict regulations to prevent any cross connections with the drinking water supply. The Recycled Water Ordinance requires installation of dual plumbing in new or re-modeled buildings and all subdivisions with a cumulative total area of 40,000 square feet or more as well as for new and existing irrigated areas of 10,000 square feet or more. Portions of the Project Area in the Oakinba, Northern Gateway, India Basin Industrial Park, Hunters Point Shoreline and South Basin Activity Nodes are located within the identified non-potable water use area. At a minimum, any development projects in these areas that meet the requirements would be subject to the Recycled Water Ordinance, and depending on the results of the Recycled Water Master Plan Update, other developments in the remaining parts of the Project Area may also be included in recycled water projects.

Depending on future developments resulting from implementation of the Project, there may be long term opportunities for specific developments in the Project Area to incorporate recycled

water in the project design. The Recycled Water Master Plan Update will be subject to separate environmental review under CEQA, but it is anticipated that in the long-term, use of recycled water within the Project Area would result in beneficial impacts to water quality in the Bay.

Net Impact to CSO Discharges

Based on the above discussion, implementation of the Project would facilitate new development in the Project Area which as a worst-case scenario would generate increased year-round sanitary sewage flows to the combined sewer system and would result in no change in stormwater runoff. Because the combined sewer system is designed to overflow during intense storms and because the increase in sanitary sewage flows would occur year-round, the Project could indirectly result in cumulative, long-term contributions to an increase in average volume of CSO discharges in the Project Area.

However, compliance with the following existing regulations and policies would protect water quality and beneficial uses of the Bay:

- The Project Sponsor would be required to coordinate with the SFPUC to ensure that new developments resulting from implementation of the Project would remain in full compliance with all aspects of the federal CSO Control Policy, including the nine minimum controls and appropriate pretreatment and pollution prevention programs. This includes compliance of all new developments with Article 4.1 of the *San Francisco Public Works Code* during both construction and operation. This would ensure consistency with existing water quality regulation protecting Bay water quality.
- The Project Sponsor would be required to comply with conservation of water use consistent with existing and future guidelines recommended by the SFPUC. This would reduce the volume of sanitary flow to the combined sewer system.
- The Project Sponsor would be required to incorporate recycled water use in planning and design (i.e., install dual plumbing) of major new developments consistent with guidelines in the Recycled Water Ordinance and the Recycled Water Master Plan Update, when adopted. This would reduce the volume of sanitary flow to the combined sewer system.

In addition, as described above, concurrent with the proposed schedule for implementation of the Project, the SFPUC has numerous ongoing planning efforts that address CSO discharges and associated water quality impacts as part of citywide plans and programs. These planning

efforts address long-term objectives of compliance with existing and future regulatory requirements and overall protection of water quality, aquatic resources and beneficial uses of San Francisco Bay. Any activities associated with the Project that could affect wastewater and stormwater management must be conducted within the context of the existing regulatory framework but also coordinated within the context of ongoing and future citywide planning efforts. Coordination of the Project with these plans would provide additional protection of water quality and beneficial uses.

- The Project Sponsor should incorporate a water sensitive approach to site design and development layouts, following guidelines outlined in “Start at the Source” and “Green Streets” (as well as following the New Development Guidelines, when adopted). This would reduce the volume of stormwater runoff draining to the combined sewer system.
- The Project Sponsor should incorporate requirements for source controls and best management practices, such as those listed in Table E.1 in Appendix E, in the Project and subsequent developments. This would minimize pollution from stormwater runoff entering the combined sewer system.
- The Project Sponsor should coordinate with the SFPUC for potential opportunities for developing and installing stormwater treatment controls, such as those listed in Table E.2 in Appendix E, within the Project Area as part of the Project. This could improve the quality of and reduce the volume of stormwater draining to the combined sewer system.
- The Project Sponsor should coordinate with the SFPUC regarding the potential applicability of the Clean Water Master Plan to new developments, particularly with regard to collection, treatment and disposal of sanitary sewage in areas currently not served by the combined sewer system.

Based on compliance with existing and future regulations and coordination with ongoing planning efforts to provide long-term water quality protection of the Bay, water quality impacts associated with changes in combined sewer overflow discharges to the Bay would be considered less than significant.

Further project-level water quality analysis may be required for subsequent development under the Project, depending on the nature and timing of the project, and further development of site specific mitigation measures applicable to individual developments may be required. In particular, potential future development in areas currently not served by the combined sewer

system, site specific environmental review may be required to address the collection, treatment and disposal of sanitary sewage.

Changes in Drainage in Areas Not Served by the Combined Sewer System

As described in the Setting, there are a few isolated areas along the waterfront in the Northern Gateway, Hunters Point Shoreline, South Basin, and Candlestick Point Activity Nodes that do not drain to the combined sewer system. Implementation of the Project would facilitate development in these areas, similar to the areas served by the combined sewer system. New development in these areas could potentially change the existing drainage patterns by increasing impervious surfaces and increasing the volume of stormwater runoff, a known source of pollution. However, since stormwater runoff from these areas does not drain to the combined sewer system for treatment and disposal, but rather to separate stormwater systems or by sheetflow to the Bay, these areas are subject to different (but related) regulatory requirements for water quality protection. Compliance with the requirements of the Phase II, Municipal Storm Water NPDES Permit would reduce potential water quality impacts associated with stormwater runoff and changes in drainage patterns to less than significant.

Currently, stormwater runoff from these areas flows directly to the Bay without treatment, though they are subject to stormwater management plans (either the Port or SFPUC plans, see Setting). New development in these areas resulting from implementation of the Project could potentially change the existing drainage patterns. Replacement of current vacant lands, such as in the Hunters Point Shoreline Activity Node along the India Basin shoreline, with structures, parking lots, pavements or other impervious surfaces, would increase the volume of stormwater runoff. In addition, it is likely that such development would involve construction of a separate stormwater system. However, specific impacts would depend on the actual design of such developments and would need to be evaluated on a project-level during subsequent environmental review. However, on a program-level, increased stormwater runoff associated with any new developments in areas served by separate sewers could be mitigated to less than significant through implementation of measures required by the Phase II permit and coordination with planning efforts associated with the Clean Water Master Plan.

General Permit NPDES Requirements for Stormwater Discharges in Separate Sewer Areas

Stormwater discharges to the separate storm sewer at Candlestick Point, to the separate systems under Port jurisdiction, or to any new separate storm sewer system are subject to the requirements of the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems. In accordance with this permit, discharges from a discretionary new development or redevelopment project shall not cause or contribute to an exceedance of water quality standards, and the project would be required to implement control measures to reduce pollutants in its stormwater discharges to ensure that water quality standards are not exceeded.

A development or redevelopment project would also be subject to the post construction design standards specified in the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems if the project falls into one of the following categories listed in the permit:

- Single-family hillside residences;
- 100,000 sq. ft. of commercial development;
- Automotive repair shops;
- Retail gasoline outlets;
- Restaurants;
- Home subdivisions with 10 or more housing units;
- Parking lots of 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to stormwater runoff.

The following list includes post-construction design standards applicable to all projects that fall into one of the above categories:

- Control peak stormwater runoff discharge rates such that they do not exceed predevelopment rates if the discharge rate would result in an increased potential for downstream erosion;
- Conserve natural areas by methods such as clustering development, limiting clearing or grading of native vegetation, maximizing trees and other vegetation, promoting natural vegetation, and preserving riparian areas and wetlands;

- Incorporate BMPs to minimize pollutant loads in discharge generated from runoff from impervious surfaces to the maximum extent practicable. Pollutants from impervious surfaces would typically include oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens;
- Incorporate BMPs to protect slopes and channels to decrease potential erosion that could affect stormwater runoff quality;
- Provide storm drain inlets with stenciling and signage with prohibitive language (such as: “No Dumping - Drains to Ocean”) and/or graphical icons to discourage illegal dumping;
- Properly design outdoor material storage areas using appropriate BMPs to ensure that materials that could contribute pollutants to runoff are either placed in an enclosure such as a shed or similar structure that prevents runoff or spillage from contacting stormwater or is protected by secondary containment structures such as berms, dikes, or curbs. The storage area must also be paved and sufficiently impervious to contain leaks and spills and have a roof or awning to minimize collection of stormwater within the secondary containment area;
- Properly design trash storage areas where trash receptacles, such as dumpsters, are located using appropriate BMPs. Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s) and be screened or walled to prevent off-site transport of trash. To further address stormwater issues, the developer could require all dumpsters to be in one designated location, possibly in a parking lot;
- Require proof of ongoing BMP maintenance through means such as legal agreements, covenants, CEQA mitigation requirements, and/or conditional use permits; and
- Use structural or treatment control BMPs that would infiltrate or treat the 85th percentile 24 hour runoff event or 80 percent of the annual runoff and control peak flows. Restaurants and gasoline outlets with less than 5,000 sq. ft. of land area would not be required to comply with this requirement.

The General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems also specifies specific design standards for each listed category of project.

For example, restaurants would be required to properly design equipment and accessory wash areas. These activities may contribute metals, oil and grease, solvents, phosphates, and suspended solids to stormwater runoff. The wash areas must be self-contained, equipped with a grease trap, and properly connected to a sanitary sewer. If the wash area is to be located outside, it must be covered, paved, have secondary containment, and be connected to the sanitary sewer. Other requirements are specified for commercial businesses, retail gasoline outlets, parking lots, and automotive repair shops.

New and redevelopment projects in areas that discharge to a separate storm sewer system would be subject to the Port stormwater management plan or the SFPUC stormwater management plan and the requirements of the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, which incorporates updated state and federal requirements related to the quantity and quality of storm water discharges from new development and redevelopment projects. In accordance with these updated requirements, new development and redevelopment projects would be required to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in storm water discharges and to manage runoff flows.

Therefore, assuming compliance with applicable water quality regulations, water quality impacts associated with stormwater runoff and changes in drainage areas in areas with separate stormwater systems would be less than significant.

Construction Impacts

Implementation of the Project would indirectly lead to a variety of construction activities throughout the Project Area. Construction activities could affect water quality due to grading and earthmoving operations, use of fuels and other chemicals for construction equipment, and demolition and construction in proximity to the Bay. Grading and earthmoving activities would result in exposure of soil during construction and could result in erosion and excess sediments carried in stormwater runoff to either the Bay or to the combined sewer system. In addition, construction activities would also likely require temporary on-site use and storage of vehicles, fuels, wastes and other pollutant sources; if improperly handled, these pollutants could be transported in stormwater runoff to surface waters. However, with proper mitigation and compliance with appropriate water quality regulations, water quality impacts associated with construction activities in the Project Area would be less than significant.

As discussed in the Setting, small parts of the Project Area are served by separate storm sewer systems within Port jurisdiction or the Candlestick Point separate storm sewer system and stormwater from some areas also drains directly to the Bay. The remainder of the area is served by the combined sewer system. Requirements for discharge of construction-related

stormwater discharge would be dependent on the location of the construction project and to which system the construction site would discharge. These are discussed separately below.

Areas that Drain to a Separate Storm Sewer System or Directly to the Bay

Projects with construction sites greater than one-acre or part of a larger development area that are located within areas that drain to the separate storm sewer systems within Port jurisdiction or at Candlestick Point as well as sites that drain directly to the Bay would be required to obtain coverage under the statewide General Permit for Stormwater Discharges Associated with Construction Activity described in the Setting section.

In accordance with this permit, a construction contractor would be required to file a Notice of Intent and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) to minimize construction water quality impacts. The SWPPP requires a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the site. The SWPPP must also specify best management practices (BMPs) that will be used to protect stormwater runoff and the placement of those BMPs; a visual monitoring program; a chemical monitoring program for nonvisible pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed as an impaired water body for sediment. Measures for erosion and sediment controls, construction waste handling and disposal, and post-construction erosion and sediment control should also be addressed along with methods to eliminate or reduce non-stormwater discharges to receiving waters.

Construction required for the installation of new infrastructure would also be subject to the requirements of the statewide General Permit for Storm Water Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects. In accordance with this permit, the owner/operator must also prepare a SWPPP specifying BMPs to control and reduce discharges of pollutants into storm water. The minimum SWPPP requirements and required monitoring would be based on the complexity of the project.

Areas that Drain to the Combined Sewer System

Projects with construction sites that drain to the combined sewer system would be subject to the requirements of the NPDES permit for the Southeast Plant, North Point Wet Weather Facility and Bayside Wet Weather Facilities, including compliance with the nine minimum controls described in the federal CSO Control Policy. A project would be required to develop an erosion and sediment control plan specifying BMPs to prevent the off-site migration of sediment and other pollutants and to reduce the effects of runoff from the construction site to the combined sewer system. Any stormwater drainage during construction would flow to the City's combined sewer system, where it would receive treatment at the SEWPCP or other wet weather facilities and would be discharged through an existing outfall or overflow structure in compliance with the existing NPDES permit. The erosion and sediment control plan must be reviewed and approved by the City prior to implementation and the City would conduct periodic inspections to ensure compliance with the erosion and sediment control plan.

Therefore, water quality impacts related to discharge of construction related stormwater runoff are less than significant with compliance with the General Construction Stormwater NPDES Permit, the General Permit for Storm Water Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects, or the NPDES permit for the Southeast Plant, North Point Wet Weather Facility and Bayside Wet Weather Facilities for discharge of construction-related stormwater to the combined sewer system.

Water Quality Impacts Related to Construction in Waters of the United States

Construction in waters of the United States is under jurisdiction of Section 404 of the Clean Water Act. If implemented, any project involving construction in waters of the United States could affect water quality during construction and possibly result in permanent loss of wetlands. Without proper mitigation, this would be a potentially significant impact.

These activities would be subject to the requirements of the US Army Corps of Engineers under Section 404 of the Clean Water Act as well as under Section 10 of the Rivers and Harbor Act with regard to any activities requiring fill, dredging, and disposal of dredge spoils

in waters of the United States. In addition, these activities may require a Streambed Alteration Permit from the California Department of Fish and Game (CDFG) and a permit from the Bay Conservation and Development Commission (BCDC), which has jurisdiction over any projects requiring dredging or filling within 100 feet of the Bay.

As discussed in the Setting, the San Francisco RWQCB has jurisdiction over projects located adjacent to or in the Bay or in a waterway with a defined bed and has permit authority over Water Quality Certification of the federally permitted activities under Section 401 of the Clean Water Act as well as activities under the jurisdiction of the BCDC. Alternatively, the RWQCB could waive their right to provide certification. To waive or certify an activity, the RWQCB must find that the proposed activity would comply with State water quality standards. If the agency denies the proposed activity, the federal permit cannot be issued.

While compliance with federal, state, regional and local regulations and associated permit requirements would provide a high level of protection of water quality, further environmental review will be required when these proposed activities are further defined. Potential hydrological impacts related to construction of the bridge across Yosemite Slough or South Basin would also need to be addressed as part of these permit requirements. More detailed, site-specific analysis and survey of potential water quality impacts as well as determination of the nature and extent of appropriate mitigation measures will be required when future projects are identified.

Therefore, water quality impacts associated with construction and implementation of future projects in Yosemite Slough, South Basin, or other waters of the United States would be considered potentially significant until further more detailed environmental review under CEQA is conducted.

NOTES – *Hydrology and Water Quality*

- ¹ San Francisco Planning Department, 1994. *Waterfront Plan Draft Environmental Impact Report*, Bayside Discharge Alternatives, 92.531E, SCH #93023040, May 20, 1994.
- ² San Francisco Planning Department, 1994. *Waterfront Plan Draft Environmental Impact Report*, Bayside Discharge Alternatives, 92.531E, SCH #93023040, May 20, 1994.
- ³ The boat launch area is not yet completed or open to the public.
- ⁴ City and County of San Francisco, 1997. *San Francisco Recycled Water Master Plan and Groundwater Master Plan, Final EIR*. 92.371E, SCH# 94123049, August 7, 1997.
- ⁵ San Francisco Public Utilities Commission (SFPUC), 2003. *Wastewater System Reliability Assessment, Baseline Facilities Report*, Draft. December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners.
- ⁶ Secondary treatment is the treatment of wastewater or sewage involving removal of organic matter using biological and chemical processes. This is a higher level of treatment than primary treatment, which is removal of floating and settleable solids using physical operations such as screening and sedimentation. Secondary treatment is less intensive than tertiary treatment, in which additional chemical and biological treatment processes are used to remove additional compounds that may be required for discharge or reuse purposes.
- ⁷ Primary treatment refers to physical treatment processes, such as screening and sedimentation, which remove large and heavy solids.
- ⁸ Regional Water Quality Control Board, San Francisco Bay Region, *Water Quality Control Plan for the San Francisco Bay Basin*, 1995.
- ⁹ SFPUC, 2003.
- ¹⁰ City and County of San Francisco, 1997. *San Francisco Recycled Water Master Plan and Groundwater Master Plan, Final EIR*. 92.371E, SCH# 94123049, August 7, 1997.
- ¹¹ In previous years, the Regional Monitoring Program included collection of samples from specific sampling locations; the closest stations monitored were Alameda and Oyster Point. In 2002 the program adopted a stratified-random sampling design which included collection of samples from random locations within five specific hydrographic regions of the Bay. The data discussed in this section are for samples collected from four randomly selected locations with the Central Bay hydrographic region, which is adjacent to the Project Area.
- ¹² San Francisco Estuary Institute, *2002 Regional Monitoring Program Annual Monitoring Results*, May, 2004.
- ¹³ Regional Water Quality Control Board, San Francisco Bay Region, *Water Quality Control Plan for the San Francisco Bay Basin*, 1995.
- ¹⁴ U.S. Environmental Protection Agency, Human Health Fact Sheet: Methodology, Revised Methodology for Deriving Health-Based Ambient Water Quality Criteria, 2000.
- ¹⁵ Regional Water Quality Control Board, San Francisco Bay Region, *Water Quality Control Plan for the San Francisco Bay Basin*, 1995.
- ¹⁶ Regional Water Quality Control Board. San Francisco Bay Region, *2002 CWA Section 303(d) List of Water Quality Limited Segment*, Approved by the USEPA: July 2003.
- ¹⁷ Regional Water Quality Control Board, San Francisco Bay Region, *Mercury in San Francisco Bay, Total Maximum Daily Load (TMDL) Project Report*, June 6, 2003.

- ¹⁸ Regional Water Quality Control Board, San Francisco Bay Region, *PCBs in San Francisco Bay, Total Maximum Daily Load Project Report*, January 8, 2004.
- ¹⁹ Regional Water Quality Control Board, San Francisco Bay Region, Notice of Public Hearing, Notice of Filing Draft Environmental Document for a Proposed Amendment to the Water Quality Control Plan for the San Francisco Bay Basin, April 30, 2004.
- ²⁰ Regional Water Quality Control Board, San Francisco Bay Region, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037664, Order No.2002-0073, for City and County of San Francisco Southeast Water Pollution Control Plant, North Point Wet Weather Facility, and Bayside Wet Weather Facilities, adopted June 19, 2002.
- ²¹ State Water Resources Control Board, Water Quality Control Order No. 2003 – 0005 – DWQ. National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004. Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit), 2003.
- ²² San Francisco Public Utilities Commission, *Storm Water Management Plan, 2003 – 2004*, January, 2004.
- ²³ Port of San Francisco, *Storm Water Management Plan, 2003 – 2004*, December, 2003.
- ²⁴ Karen Hurst, San Francisco Public Utilities Commission, Bureau of Environmental Regulation and Management, Telephone conversation with Mary McDonald of Orion Environmental Associates. July 7, 2004.
- ²⁵ A point source discharge of stormwater is a flow of rainfall runoff in some kind of discrete conveyance such as a pipe, ditch, channel, or swale.
- ²⁶ State Water Resources Control Board, Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. Cas000001 (General Permit), Waste Discharge Requirements (WDRS) For Discharges Of Storm Water Associated With Industrial Activities Excluding Construction Activities, 1997, available at www.swrcb.ca.gov/stormwtr.
- ²⁷ Port of San Francisco, *Storm Water Management Plan, 2003 – 2004*, December, 2003.
- ²⁸ State Water Resources Control Board, *Notice of Public Hearings, Reissuance of the National Pollutant Discharge Elimination System General Permit for Discharges of Stormwater Associated with Industrial Activities (Industrial General Permit)* and associated fact sheet and draft permit, 2003, available at <http://www.swrcb.ca.gov/stormwtr>.
- ²⁹ State Water Resources Control Board, Water Quality Order 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges Associated With Construction Activity (General Permit), 1999, available at <http://www.swrcb.ca.gov/stormwtr>.
- ³⁰ State Water Resources Control Board, Order No. 2003-007-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000005, Waste Discharge Requirements (WDRS) for Discharges of Stormwater Runoff Associated With Small Linear Underground/Overhead Construction Projects (General Permit), 2003.
- ³¹ SFPUC, 2003.
- ³² SFPUC, 2003.
- ³³ SFPUC, 2003 and 2004.
- ³⁴ At this time, stormwater management approaches such as site design and treatment controls are only required in areas served by separate systems under the Municipal Storm Water NPDES Permit. Stormwater best management practices (BMPs) could be required citywide if adopted by the SFPUC.
- ³⁵ Bay Area Stormwater Management Agencies Association, 1997; Metro, 2002.

N. BIOTIC RESOURCES

This section describes the existing biotic resources occurring within the Project Area and evaluates direct and indirect effects of the Project on existing vegetation, including sensitive native plant communities and street trees; sensitive wildlife species and habitat; and aquatic resources, including San Francisco Bay and its shoreline.

SETTING

TERRESTRIAL VEGETATION

The Project Area is highly urbanized, and almost all native vegetation has been removed and replaced by impervious surfaces or urban landscaping comprised mostly of non-native horticultural varieties of trees, shrubs, and groundcovers. Ruderal (weedy) vegetation, comprised of non-native annual grasses and forbs common to the Bay Area, occurs in disturbed or neglected areas such as vacant and underutilized lots. Vegetation in the Candlestick Point State Recreation Area is mowed regularly and supports mainly introduced ornamental species.

AQUATIC RESOURCES

Bayview Hunters Point contains over 14 miles of San Francisco Bay shoreline. During occupation by native peoples, the landscape was dominated by gently sloping coastal prairie grassland that provided high-quality, year-round grazing habitat for native wildlife. Freshwater springs were abundant. Islais Creek collected flow from its several tributaries, drained eastward to the Bay, and discharged into a large salt marsh influenced by tidal flows. Because deep water occurs just offshore, the muddy creek delta was filled to increase speculative and industrial development opportunities related to shipping. At present, much of the existing waterfront area consists of artificial fill placed on top of the original Bay mud. However, remnants of this historic marshland still exist in the Project Area. The Northern Gateway, South Basin, Hunters Point Shoreline, and Candlestick Point Activity Nodes are

located within shoreline margin habitats. These shoreline habitats are described below. The remaining activity nodes (Town Center, Health Center, and Oakinba), as well as the Bayview Industrial Triangle and India Basin Industrial Park, are all inland from the Bay margins, almost entirely built out, and do not support sensitive habitats or even habitats that could be considered capable of supporting sensitive species. Because of this, these activity nodes are not specifically addressed.

Northern Gateway Activity Node

The Northern Gateway Activity Node encompasses the upper reaches of the Islais Creek Channel. There is a small, narrow band of mud flats on the southern bank of this channel.

South Basin Activity Node

The South Basin Activity Node includes the channel of Yosemite Slough and a portion of the western shoreline of South Basin in San Francisco Bay.

Hunters Point Shoreline Activity Node

The Hunters Point Shoreline Activity Node is adjacent to India Basin, an extension of San Francisco Bay. The eastern portions of the Hunters Point Shipyard border San Francisco Bay. The India Basin Shoreline Park is currently being expanded and the tidal salt marsh and upland areas are being restored by the San Francisco Recreation and Park Department, other City departments, and the Trust for Public Land. Upon completion, the Shoreline Park will extend south from Herons Head Park (Pier 98) to the Shipyard. Future development on the west shoreline opposite Herons Head Park would maintain waterfront access.

Candlestick Point Activity Node

The Candlestick Point Activity Node includes the western portion of South Basin and the northern shoreline of Candlestick Cove. Historically, the land on which the stadium and the Candlestick Point Shoreline Recreation area is situated was coastal chaparral scrub, tidal salt marsh, and open waters of the Bay. This activity node borders Bayview Park, one of many

significant natural areas managed by the San Francisco Recreation and Parks Department Natural Areas Program.¹

AQUATIC HABITATS

As discussed above, the Project Area is almost entirely urbanized and the biological resources within the Project Area reflect this fact. Perhaps the only areas that are capable of supporting sensitive resources are themselves considered a sensitive resource. These are the aquatic habitats such as wetlands, mud flats, northern coastal salt marsh, creeks, and sloughs. These habitats are discussed in the following paragraphs.

Wetlands and Mud Flats

The biological importance of wetlands is a function of their size, productivity, and the number of species that they support. Nutrient levels are particularly rich where flow from creeks and rivers blends with tidal waters. The mud flats and marshes along the Bay shoreline are an important source of food and shelter to a wide variety of fish and wildlife.

Mud flats are unvegetated areas covered at high tide and exposed at low tide. Hundreds of thousands of birds migrating along the Pacific Flyway, a primary western migratory path, depend upon the Bay shoreline and its associated mud flats for resting and feeding areas. Mud flats also support a number of invertebrates, including worms and crustaceans, that provide valuable foraging opportunities for a variety of aquatic and avian species. Extensive mud flats occur between low water and mean sea level in the shallow western portion of South Basin Activity Node northeast of Candlestick Point and extend almost to the head of Yosemite Slough. The head of Yosemite Slough is also known as Double Rock Wetlands. Mud flats also occur along the shoreline southwest of Candlestick Point. There is a small, narrow band of mud flats on the southern bank of the mouth of Islais Creek. A seasonally occurring green alga (*Enteromorpha* sp.) that covers almost the entire surface of the mud flats and outer and middle portions of the creek and slough channels is exposed at low tide. Other species of algae grow on rocks and mud in areas inundated at high tide.

Northern Coastal Salt Marsh

The Northern Coastal Salt Marsh community occurs along sheltered inland margins of bays, lagoons, and estuaries, including the Islais Creek and Yosemite Slough channels and the shoreline of San Francisco Bay. The hydric soils on which this habitat is found are subject to regular tidal inundation by salt water with a shallow permanent water table. The salt marsh community is located in regularly or irregularly flooded channels and mud flats along the Bay margins, but is also typically located at higher elevations than the mud flats.

Vegetation occurring in the salt marsh community is salt tolerant and forms a moderate to dense cover up to 1-meter tall. Salt marsh plants typically grow actively in summer and are dormant in winter. The native California cordgrass (*Spartina foliosa*) can be found in these areas along with salt-water cordgrass (*Spartina alterniflora*), an invasive, non-native species that was recently introduced into salt marshes in the San Francisco Bay. Hybrids of these species now dominate the upper intertidal sandy south-facing shoreline at Hunters Point, Pier 98, India Basin, and Yosemite Creek.

Creek Channels

Above the high tide line, the upper banks of the Islais Creek and Yosemite Slough channels support very limited, fragmented patches of pickleweed (*Salicornia virginica*), a low-growing native shrub.

Islais Creek

In its upper reach, the banks of Islais Creek have been rip-rapped below the high tide line and support very little vegetation. A few individuals of marsh gumplant (*Grindelia stricta* var *angustifolia*) occur at the top of the bank on the northern side between the Islais Creek Promenade and the Third Street Bridge.

Below the Third Street Bridge, the natural banks of Islais Creek have been replaced with creosoted timber pilings, concrete walls, rock revetment, and rubble. Some algae grow along

the portion of the shoreline exposed at low tide. There is no vegetation along the bank of the creek in this area.

The most valuable aquatic habitat within Islais Creek is the partially dilapidated wharf/piling extending along the northern bank about 1,000 feet downstream of the existing Third Street Bridge. This habitat provides a hard structure for attachment for a diverse assemblage of invertebrates. It is likely that Pacific herring spawn and their eggs attach to hard surfaces within the creek channel such as on these pilings.

Yosemite Slough

The northern shoreline at the end of the Yosemite Slough is adjacent to vacant state land. The shoreline opposite Double Rock Street has been rip-rapped and degraded by debris and rubble. Only a single, 3-foot-diameter colony of pickleweed was observed above the high tide line in this area.

WILDLIFE RESOURCES

Terrestrial Wildlife

Urban areas that have been altered significantly and developed for buildings, parking, and landscaping provide minimal habitat for wildlife. Terrestrial wildlife occurring in the Project Area is comprised of common species of birds and mammals adapted to urban settings in the San Francisco Bay Area. Bird species occurring in the Project Area include the non-native rock pigeon, European starling, and house sparrow. A variety of native species can also be found here, including the mourning dove, Brewer's and red-winged blackbird, northern mockingbird, and house finch. Raptors, including the red-tailed hawk, American kestrel, and turkey vulture, occasionally forage over adjacent grassland areas. Common mammal species occurring in the Project Area include the non-native house mouse, black (roof) rat, Norway rat, and feral cat. Native species, such as California vole, raccoon, skunk, and opossum, may occur in vacant lots adjacent to Islais Creek and Yosemite Slough. The black-tailed jackrabbit, deer mouse, California vole, western fence lizard, and gopher snake have been observed in ruderal grassland adjacent to the south shore of Yosemite Slough, northeast of Candlestick

Point. Botta's pocket gopher occurs in lawn turf in parks and athletic fields, and in vacant lots throughout the Project Area.

Aquatic Wildlife

Aquatic wildlife occurring in Islais Creek and Yosemite Slough and along the margins of San Francisco Bay includes a variety of shorebirds, waterfowl, and fish common to brackish and saltwater habitats in the Bay Area. These species forage on plants such as diatoms and algae, and invertebrates such as worms, clams, oysters and mussels that occupy mud flats and tidal marshes. A marine community composed of mud snails, tube worms, limpets, and other sessile (attached; not free to move about) organisms, such as barnacles, sponges, and anemones, occur on exposed rocks and pilings in the creek and slough channels.

Resident wading birds, including herons and egrets, find limited year-round foraging habitat along the sparsely vegetated sides of channels and sloughs. Migratory waterfowl and shorebirds require a series of protected stopover sites in which to rest and forage along their migration routes. The channels, sloughs, and shallow off-shore basins bordering the Project Area provide a minimal amount of resting and foraging habitat (but no breeding or nesting habitat) and shelter from storms for migratory waterfowl and shorebirds during spring and fall migrations.

The freshwater streams within the Project Area have been highly modified and no longer support runs of salmon. However, San Francisco Bay is an important migratory route for anadromous fish species, such as steelhead, Chinook salmon, and coho salmon. Common fish species in this part of the Bay include striped bass, starry flounder, perch, and Pacific halibut. White croaker (king-fish) have been taken by fisherman and in a bottom sample taken at the mouth of Islais Creek.

In the Project Area, estuarine wildlife habitat is limited in extent and has been degraded as a result of historical industrial and sewage discharges. These discharges, including pollutants such as heavy metals, have accumulated in the sediments, where they remain today. From a regional wildlife management perspective, the degraded Islais Creek channel and Yosemite

Slough provide minimal support for wildlife and are not capable of sustaining significant populations of the species observed because of the lack of suitable breeding habitat and likely contamination in the sediments.

Special-status Species

The greater San Francisco Bay Area supports a wide array of plant, wildlife, and fish species. Many of these species are of management concern either because they are listed as threatened, endangered, or species of concern, have been designated as “sensitive” on the basis of federal, state or local resource agencies, or because they support an important commercial industry. Collectively, these are termed “special-status species.” The California Natural Diversity Database (CNDDB) reports 50 special-status species from the three U.S. Geological Survey (USGS) 7.5-minute quadrangles that include the Project Area.² The California Native Plant Society (CNPS) reports 16 species of sensitive plants from the same area.³ The U.S. Fish and Wildlife Service (USFWS) lists 137 species for the same quadrangles.^{4,5} Combined, only seven special-status species of plants have been reported within or outside of and adjacent to the Project Area:

- Alkali milk-vetch (*Astragalus tener* var *tener*) was reported from two collections near Potrero Hill in 1868 and is believed to be extirpated, which means that the species is extinct (or no longer present).
- Fragrant fritillary (*Fritillaria liliacea*) was collected in the late 1800s from somewhere in the vicinity of Potrero Hill and Bernal Heights; these populations are believed extirpated.
- Diablo helianthella (*Helianthella castanea*) was reported from Bayview Hill in 1920 but has not been recently observed.⁶
- Beach layia (*Layia carnosa*). This species is believed to have been extirpated as the habitat required by this species is no longer present within the San Francisco Peninsula and the occurrence dates from 1904.
- Rose linanthus (*Linanthus rosaceus*) is reported from a non-specific San Francisco location in 1885 and is now believed to be extirpated.
- Adobe sanicle (*Sanicula maritima*) was reported from the Potrero Hill area in 1895 and is now believed by the CNPS to have been extirpated.
- San Francisco owl’s-clover (*Triphysaria floribunda*) has been reported from six locations within the San Francisco Peninsula since 1881. The most recent reports of extant

populations are from the San Francisco Presidio and San Bruno Mountain in 1995 and 1989 respectively. The Potrero Hill population is believed to have been extirpated.

Nineteen species of animals are reported from the CNDDB for the above mentioned USGS quadrangles. None of these are reported from within the Project Area itself and no special-status animals species are known to exist in the Project Area (see Table E.1 in Appendix E).

Three species of federally protected butterflies can be found on the San Francisco Peninsula. The native scrub and grassland habitats of San Bruno Mountain support populations of the federally threatened bay checkerspot butterfly (*Euphydryas editha bayensis*), and the federally endangered San Bruno elfin (*Incisalia mossii bayensis*) and mission blue (*Icaricia icarioides missionensis*) butterflies. Mission blue butterflies have been reported from Bayview Hill just south of Jameson Road outside of the Project Area. Mission blue butterflies require native lupine plants (*Lupinus* sp.) on which they lay eggs and their larvae feed; the adults forage on nectar from many sources, including coast buckwheat (*Eriogonum latifolium*). Both lupines and buckwheats can be found on Bayview Hill. However, lupines are generally not found within the Project Area except for small area of beach lupine scrub at India Basin Shoreline Park. Coast buckwheat are not known from within the Project Area. Bay checkerspot and San Bruno elfin butterflies require host plants not found in the Project Area, native serpentine grasslands and broadleaf stonecrop (*Sedum spathulifolium*) respectively.⁷ Because these species and their required habitat does not occur within the Project Area, they will not be affected by the Project and are not discussed further within this document.

Several federal- and state-listed fish species migrate through San Francisco Bay on their way to spawning grounds in tributaries of the Bay and Delta (see Table E.1 in Appendix E). No spawning habitat for these species is present in the vicinity of the Project Area. No threatened or endangered fish species are known to inhabit the waters of the San Francisco Bay in the immediate vicinity of the Project Area. Offshore, San Francisco Bay supports a small yet productive commercial Pacific herring fishery. Pacific herring are not protected by either the State of California or the federal government. Because herring are harvested for their roe, they are an important species in the economy of the San Francisco Bay Area and their populations are monitored regularly by the CDFG. The Pacific herring is an important species

in the ecology of San Francisco Bay as well because herring, along with sardines and anchovies, are a primary food source for salmon and other sport fish. Pacific herring generally enter the Bay from about November 1 to March 30 of each year and spawn in intertidal and other shallow-water habitats that include but are not limited to, the San Francisco waterfront from the Golden Gate to Hunters Point. Large numbers of herring larvae have been observed in the vicinity of Hunters Point. The actual site of Pacific herring spawning in San Francisco Bay changes from year to year and spawning may occur at numerous locations around the Bay. Herring eggs adhere to substrates such as kelp and other aquatic vegetation, marina pilings, riprap, retaining walls, and bulkheads occurring along the San Francisco Bay waterfront.

The California brown pelican (*Pelecanus occidentalis californicus* – federal and state endangered) is a migratory species that is a resident in the San Francisco Bay Area during the summer months. Nesting colonies and communal roosts of the brown pelican are fully protected by state and federal law. Although foraging and resting habitat for brown pelicans is common and widespread throughout the Bay, no breeding or roosting habitat for pelicans is present in the Project Area or immediately offshore.

In the Project Area, pickleweed-dominated northern coastal salt marsh habitat is not sufficiently developed to provide habitat for the California clapper rail (*Rallus longirostris obsoletus* – federal and state endangered), California black rail (*Laterallus jamaicensis cotuniculus* – federal species of concern and state threatened), or the salt marsh harvest mouse (*Reithrodontomys raviventris* – federal and state endangered).

Small numbers of marine mammals, including the harbor seal (*Phoca vitulina richardii*) and California sea lion (*Zalophus californianus*) have established haul outs in several locations along the shoreline of San Francisco Bay. Neither species is listed under the California or Federal Endangered Species Acts, but both are protected by the Federal Marine Mammal Protection Act. There are no haul-outs used by harbor seals or sea lions near the Project Area.⁸ No other sensitive mammals are known to occur in the Project Area.

Sensitive Habitats

Sensitive habitats are considered important because of their high species diversity, high productivity, limited distribution, declining status or a combination of these qualities. These habitats are recognized as important by local and state agencies and impacts to sensitive habitats are considered when evaluating a project's effects on the biological resources. The most sensitive of these are habitats that most closely resemble native habitat in form and function. Within the Project Area all sensitive habitats are associated with aquatic resources and include wetlands, mud flats, and Northern Coastal Salt Marsh. A jurisdictional delineation and official wetland determination was not obtained from the Corps for this project (see the following Federal Regulations section). However, the pickleweed areas on the channel and slough banks likely meet the criteria to be considered wetlands, and are a viable (capable of living and reproducing) wetland habitat used by wildlife for foraging.

State and federal wetland policies specify that there should be "no net loss" of wetlands or wetland functions (see discussion of regulations below). These policies reflect the high values of wetland habitat and the minimal remaining extent and quality of wetlands due to past losses. Northern Coastal Salt Marsh is considered a sensitive community because it has high habitat value to wildlife and has declined drastically in the Bay Area and other coastal areas of California. Northern Coastal Salt Marsh is capable of supporting many sensitive species

METHODOLOGY

Existing data, environmental reports, and other analyses were reviewed and evaluated, including the CDFG Natural Diversity Data Base;⁹ CDFG's lists of State and Federally Listed Endangered and Threatened Animals of California,¹⁰ Special Animals,¹¹ and State and Federally Listed Endangered, Threatened, and Rare Plants of California;¹² the *Mission Bay Subsequent Draft EIR*;¹³ *San Francisco Giants Ballpark at China Basin FEIR*;¹⁴ *Third Street Light Rail Project FEIS/FEIR*;¹⁵ *Hunters Point Shipyard Revised Draft EIS/EIR*;¹⁶ the *San Francisco Southern Waterfront DSEIR*;¹⁷ the City of San Francisco Urban Forestry Ordinance;¹⁸ and the Bayview Hunters Point Community Revitalization Concept Plan.¹⁹ The activity nodes were surveyed by an EIP biologist, by car and on foot, to identify biotic

resources and potential impacts to biotic resources resulting from implementation of the Project.

REGULATORY FRAMEWORK

Several federal, state, and regional agencies have jurisdictional authority over modifications to stream channels, riverbanks, lakes, and other wetland features occurring within the Project Area. The following laws, regulations, and policies are summarized to provide a regulatory setting applicable to biotic resources. Many of the permits and regulatory actions discussed below include conditions to mitigate adverse impacts resulting from development activities.

Federal Regulations

U.S. Army Corps of Engineers - San Francisco District (Corps)

The regulatory authority of the Corps is derived from Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Section 404 of the Clean Water Act requires a permit from the Corps for work involving placement of fill or discharge of dredged materials into any “waters of the United States.” The Corps and the EPA jointly define wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Wetlands have to meet the following criteria established by the Corps to be considered jurisdictional:

- inundation or saturation for at least a portion of the growing season;
- prevalence of hydrophytic vegetation (plants that are adapted to growing in saturated soils); and,
- the presence of hydric soils (soils that are saturated for long periods of time and develop without oxygen).

In tidal waters such as those found adjacent to the Project Area, Corps 404 jurisdiction extends up to the mean high tide line or to the boundary of adjacent wetlands (as defined above), whichever is higher. Section 10 of the Rivers and Harbors Act requires Corps authorization

for work or structures in or affecting “navigable waters.” Section 10 is processed with the 404 permit as a procedural, not a regulatory, permit. For work or structures in tidal or navigable waters, Section 10 jurisdiction extends to the mean high water line.

Areas of creek and slough banks where pickleweed is present meet all three criteria because they are inundated by high tides for varying lengths of time at least twice in a 24-hour period, pickleweed is an obligate wetland species adapted for life in saturated soil conditions, and the Bay mud on which the pickleweed grows meets the characteristics of hydric soils as defined in the Corps’ *Wetland Delineation Manual*.

Section 404 permits are either individual or nationwide permits. Nationwide permits cover activities considered to result in minimal impacts to aquatic resources in Corps jurisdiction and are approved as an administrative action. Individual permits are used when a project does not qualify for a nationwide permit and require preparation of a public notice (with 30-day comment period) and a more extensive public review.

The Corps is required to consult with the USFWS, the EPA, and, potentially, the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) in carrying out its discretionary authority under Section 404 when there are potential impacts to species listed under the Federal Endangered Species Act.

In reviewing a project, the Corps requires a certification or waiver under Section 401 of the Clean Water Act from the San Francisco Bay RWQCB and clearance from the BCDC. The RWQCB and BCDC requirements are discussed below, under State Regulations.

The Corps’ Dredged Material Management Office (DMMO) oversees a common regulatory process that is formally permitted through the Corps, RWQCB, BCDC, and, potentially, depending on the region, many other entities as well. If a project involves dredging in San Francisco Bay, the Corps DMMO should be contacted for information on the proper materials and instructions.

U.S. Fish and Wildlife Service

The mission of the USFWS is to conserve, protect, and enhance fish and wildlife, and their habitats. The USFWS reviews and comments on permit proposals pursuant to the Fish and Wildlife Coordination Act, the Clean Water Act, the California Environmental Quality Act (CEQA), the National Environmental Protection Act (NEPA), and the Federal Endangered Species Act. The USFWS's comments focus on the effects of projects on all non-marine fish and wildlife resources and the habitats that support those resources.

Consultation with the USFWS is conducted through Section 10 of the Federal Endangered Species Act when impacts to federally listed endangered or threatened species or critical habitat require a "take" permit. If there is another federal agency involved, such as the Corps, consultation occurs under Section 7 of the Federal Endangered Species Act.

National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries)

Under Sections 7 and 10 of the Federal Endangered Species Act, the NOAA Fisheries' mission is to conserve marine resources by maintaining the health and productivity of marine, estuarine, and anadromous fish; shellfish; and marine mammals. The NOAA Fisheries reviews projects under the Magnuson Fishery Conservation and Management Act, the Fish and Wildlife Coordination Act, and many other acts. The NOAA Fisheries review is required when activities associated with a project take place in an area of San Francisco Bay where there are sensitive commercial and recreational fisheries.

U.S. Environmental Protection Agency

The EPA is responsible for implementing federal laws designed to protect air, water, and land. The EPA is a consulting agency to the Corps in reviewing permit applications (particularly in regard to ensuring compliance with NEPA) and oversees the regulatory activities of the Corps on a programmatic level. The State of California is within EPA Region IX.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act makes it unlawful to “take” (kill, harm, harass, etc.) any migratory bird listed in 50 CFR 10, including their nests, eggs, or products. There are over 800 species of birds listed in the Migratory Bird Treaty Act. These include relatively common birds like the American robin and red-winged blackbird.

Federal Endangered Species Act of 1973

Section 3 of the Federal Endangered Species Act defines an endangered species as any species or subspecies “in danger of extinction throughout all or a significant portion of its range”. Proposed endangered or threatened species are those for which a proposed regulation, but not a final rule, has been published in the *Federal Register*.

Section 7 of the Federal Endangered Species Act requires that federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. This obligation requires federal agencies to consult with the USFWS on any actions (including issuing Section 404 permits or federal funding) that may affect listed species to ensure that reasonable and prudent measures will be undertaken to mitigate impacts on listed species. Consultation with the USFWS can be either formal or informal depending on the likelihood of the action to adversely affect listed species or critical habitat. Once a formal consultation is initiated, the USFWS will issue a Biological Opinion (either a “no jeopardy” or a “jeopardy” opinion) indicating whether the proposed agency action will jeopardize the continued existence of a listed species or result in destruction or modification of a species or its designated critical habitat that may lead to extinction of a species (a “jeopardy” opinion). A federal permit cannot be issued or federal money awarded to a project with a “jeopardy” opinion unless it is redesigned in such a manner that the USFWS agrees that it will not jeopardize a species.

State Regulations

California Endangered Species Act

The California Endangered Species Act declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. The California Endangered Species Act established that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. Listed species are generally given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

California Environmental Quality Act – Treatment of Non-Listed Special-Status Plant and Animal Species

Both the Federal and State Endangered Species Acts protect only those species formally listed as threatened or endangered (or rare in the case of the state list). Section 15380 of CEQA Guidelines, however, independently defines “endangered” species of plants or animals as those for which survival and reproduction in the wild are in immediate jeopardy, and “rare” species as those that occur in such low numbers that they could become endangered if their environment continues to deteriorate. Therefore, a project will normally have a significant effect on the environment if it will substantially affect a rare or endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

California Fish and Game Code Sections 3503, 3503.5, 3800

These sections of the California Fish and Game Code prohibit the “take, possession, or destruction of birds, their nests or eggs.” This protects all non-game birds except European starlings and English sparrows. Removal of street trees and other landscaping could cause a

“take” resulting in nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young). Such a take could also violate federal law protecting migratory birds, as described above.

California State Water Resources Control Board (SWRCB)

The goal of the SWRCB is to ensure that California water resources are put to maximum beneficial use and that the best interests of the public are served. The SWRCB administers the State’s water quality, water pollution control, and water rights functions as part of the California EPA. The SWRCB provides policy guidance and budgetary authority to the San Francisco RWQCB. The joint action of the SWRCB and the RWQCB constitutes a comprehensive program for managing water in California.

The SWRCB regulates Section 401 of the Clean Water Act that grants each state the right to ensure that the state’s interests are protected on any federally permitted activity occurring in “Waters of the State”. California regulates projects under the Corps’ jurisdiction to ensure and certify compliance with state regulations. Activities covered under a Section 404 permit from the Corps require authorization from the State of California. A Section 401 Water Quality Certification or waiver from the SWRCB is required before a Section 404 permit is issued.

San Francisco Bay Conservation and Development Commission

The main focus of BCDC is to prevent unnecessary filling of the Bay, promote appropriate water-oriented shoreline development, and provide maximum public access to San Francisco Bay. The proponent of any activity proposing to fill, extract materials, or change the use of water, land, or structures in or around San Francisco Bay must first obtain a permit from the BCDC. Fill includes dirt, sand, dredge spoils, debris, garbage, refuse, or any other substance or material, including pilings; any water coverage whether on pilings or by cantilever; and any material, including structures, paving, and landscaping, placed on land. BCDC’s permit jurisdiction includes all areas of San Francisco Bay subject to tidal action and a “shoreline band” that extends 100 feet inland from areas subject to tidal action. BCDC also has

jurisdiction over salt ponds, managed wetlands, and certain other waterways and is responsible for making a determination of consistency with the Federal Coastal Zone Management Act.

Corps authorization for a project is not valid without a permit from the BCDC. A public hearing is held on an application for a major permit and the application may be reviewed at hearings held by the engineers and designers who advise the BCDC.

Local Regulations

Urban Forestry Ordinance

Trees, including street trees and trees on public property, are subject to the San Francisco Urban Forestry Ordinance (Article 16 of the San Francisco Public Works Code, Sections 800 through Section 814). Section 801(a) of the Urban Forestry Ordinance (Ordinance) recognizes the public benefits of trees on the City's streets and public places. Section 802 of the Ordinance defines "removal" and "injury" of trees. Injury includes any intentional or negligent act which causes a tree or landscape material to decline and/or die within a period of three years, including but not limited to damage inflicted upon the root system of a tree by the application of toxic substances, the operation of heavy machinery, the change of natural grade above or below the root system or around the trunk of a tree, excessive pruning, or the severing of part or all of the trunk. Section 802(g) requires payment of in-lieu fees equal to the replacement value of trees to be removed or trees that have been destroyed. Section 804 of the Ordinance assigns jurisdiction for planning, planting, maintenance, and removal of street trees within the Project Area to the Department of Public Works (DPW) of the City and County of San Francisco. Section 806(i) states that it is unlawful to remove any street tree without a valid permit for such work issued by the DPW. The DPW encourages and supports Neighborhood Planting Programs (Section 807(b)).

IMPACTS

Impacts resulting from implementation of the Project could occur to vegetation and wildlife in general, and to sensitive habitats in particular. Impacts to sensitive resources are usually more

closely regulated than are impacts to less sensitive resources. The standards used to determine if an impact to biological resources is significant are discussed below.

SIGNIFICANCE CRITERIA

Impacts to biological resources are considered significant if implementation of the Project would result in one or more of the following conditions:

- Substantially reduce the habitat of a wildlife species;
- Cause a wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species;
- Interfere substantially with the movement of any resident or migratory wildlife species; or,
- Result in the loss of wetland or riparian habitat.

In addition, the following are considered in evaluating potential impacts to biological resources:

- any change in the diversity of plant or animal species;
- any introduction of new species of plants or animals into the area; and
- the deterioration of existing fish or wildlife habitat; or removal of substantial numbers of mature or scenic trees.

PROGRAM EFFECTS

The following impacts are specific only to those activities that could occur as a result of implementation of the Project. The Project Area is almost entirely built out and supports no known sensitive species. Also, the Project does not have specific physical elements other than those associated with changing truck routes, land use designations, and improvements to existing landscaping. For these reasons, implementation of the Project does not exceed the significance criteria as they relate to sensitive species, wildlife movement, or species diversity.

Implementation of the Project may result in impacts to wetland habitat, street trees, and nesting birds. Although these elements are discussed below and mitigation measures are proposed, it is expected that site-specific environmental evaluation would be conducted for site-specific individual projects that fall within the Project Area, like the Enhanced Truck Route Program.

Construction activities within or near shoreline portions of the Project Area could directly impact wetlands, mud flats, or salt marsh habitats in a variety of ways, including placement of fill, structures, or alteration of habitat. Any activities within these areas could result in loss of sensitive habitats or species that use these habitats. Impacts to these sensitive habitats could be considered potentially significant (see **Mitigation Measure 17**).

Construction activities associated with the Project would generally be limited to existing paved streets or disturbed areas. Street trees within the Project Area are not sensitive species. However, there is potential that damage to existing street trees and other mature vegetation (as a result of injury to roots, trunk, or branches) could occur at any construction site within the Project Area. Because they are regulated by the Urban Forestry Ordinance, damage to, or removal of, existing mature trees could be considered a potentially significant impact (see **Mitigation Measure 18**).

Removal of street trees and other landscape vegetation could also result in disturbance or mortality of adult or juvenile resident bird species. Disturbance could result in nest abandonment. Because of the high levels of development and human activity in the Project Area, only common urban bird species are likely to nest in street trees. No special-status species are known to nest within the Project Area. For these reasons, removal of street trees and landscape vegetation would not surpass the significance criteria for this project and would be considered a less-than-significant impact; therefore, no mitigation is required. Depending on the timing and species affected, vegetation removal could result in a potential violation of Fish and Game Code (Sections 3503, 3513, or 3800) if it would result in destruction of bird nests. It is expected that the project sponsor would comply with the applicable regulations. Although this impact is considered less than significant, the following improvement measure is provided to facilitate compliance with state and federal laws related to the protection of nesting

birds (see Mitigation Measure 19). With implementation of Mitigation Measures 17 through 19, all impacts would be reduced to a less-than-significant level.

NOTES – *Biotic Resources*

- ¹ EIP Associates, Significant Natural Resource Areas Management Plan, Draft, 2002. Prepared for the Natural Areas Program, San Francisco Recreation and Park Department.
- ² CDFG (California Department of Fish and Game), California Natural Diversity Database, Rarefind Version 3.0, 2004. Information dated January 5, 2004.
- ³ CNPS (California Native Plant Society), Inventory of Rare and Endangered Plants (online edition, v6.2). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor, 2003. Accessed on Mar. 18, 2004 from <http://www.cnps.org/inventory>
- ⁴ The 137 species reported by the USFWS includes pelagic and marine species such as whales, sea turtles, and abalone which do not occur within the Project Area. They also include many relatively common migratory bird species which may forage on the mudflats of the project area but do not breed within the project area. The majority of the plant species reported by the USFWS are not reported by the CNPS or the CNDB as occurring within these quadrangles. Therefore, because it includes many species that do not occur within the area and many more that have not been reported in the other databases, the USFWS species lists for these areas are presented for reference purposes only. The analysis focuses on those species reported by the CNDB and CNPS as actually occurring within the San Francisco North, South, and Hunters Point quadrangles.
- ⁵ USFWS (U.S. Fish and Wildlife Service), Federal endangered and threatened species that may be affected by projects in the Hunters Point, San Francisco North, and San Francisco South 7½ minute quads, 2004. Database updated March 1, 2004. Database search on March 25, 2004. Available online at http://sacramento.fws.gov/es/spp_lists/QuadName_Search.cfm
- ⁶ EIP Associates, 2002.
- ⁷ While surface outcroppings of serpentine occur in the upland areas of the Northern Gateway and Hunters Point Shoreline Activity Nodes, no serpentine grasslands have been identified.
- ⁸ Richmond Bridge Harbor Seal Survey, Bay Area harbor seal haul-out and breeding sites, 2004. Available online at: <http://userwww.sfsu.edu/~halmark/map.htm>
- ⁹ CDFG, 2004.
- ¹⁰ CDFG, State and Federally Listed Endangered and Threatened Animals of California, 2004. Wildlife and Habitat Data Analysis Branch. Available online at <http://www.dfg.ca.gov/whdab/pdfs/TEAnimals.pdf>
- ¹¹ CDFG, Special Animals, 2004. Wildlife and Habitat Data Analysis Branch. Available online at <http://www.dfg.ca.gov/whdab/html/animals.html>
- ¹² CDFG, Special vascular plants, bryophytes, and lichens list. Wildlife and Habitat Data Analysis Branch, 2004. Available online at: <http://www.dfg.ca.gov/whdab/pdfs/spplants.pdf>
- ¹³ EIP Associates, *Mission Bay Subsequent Draft Environmental Impact Report*, 1998. SCH# 97092068, SF# 96.771E
- ¹⁴ EIP Associates, *San Francisco Giants Ballpark at China Basin Final Environmental Impact Report*, 1997. SCH#. 96102056, SF# 96.176E

- ¹⁵ ICF Kaiser, *Third Street Light Rail Project Final Environmental Impact Report/ Final Environmental Impact Statement*, 1998. SCH # 96102097, SF# 96.281E
- ¹⁶ Uribe & Associates, *Revised Draft Final Environmental Impact Report/ Final Environmental Impact Statement for the Disposal and Reuse of the Hunters Point Shipyard*, 1998. SCH#95072085, SF# 96.771E
- ¹⁷ ESA (Environmental Science Associates), *San Francisco Southern Waterfront Draft Supplemental Environmental Impact Report*, 2000. SCH# 94123007, SF# 1999.377E
- ¹⁸ San Francisco Public Works Code, Article 16 Sections 800-814, inclusive as amended in 1995.
- ¹⁹ Bayview Hunters Point Community Revitalization Concept Plan, March 2002.

O. PUBLIC SERVICES AND UTILITIES

This section identifies the public service and utilities setting in the Project Area. For purposes of this analysis, public services refers to police protection, fire protection, schools, libraries, community centers, and parks. Utilities identified in this section include water supply and distribution, as well as solid waste services.

Agencies providing these public services and utilities were contacted to obtain information regarding available service levels and current or anticipated constraints to serving the Project.

It should be noted that wastewater collection, treatment, and services and storm drains are discussed in section III.M, Hydrology and Water Quality.

SETTING

This analysis relies on the employment, population, and housing statistics identified in Section III.C. The employment, population, and housing Study Area is larger than the Project Area (see Figure III.C-1) and generally includes all of Bayview Hunters Point, except the Shipyard.

PUBLIC SERVICES

Police Protection

Police services in the City and the Project Area are provided by the San Francisco Police Department (SFPD), which is divided into four separate bureaus: Administration, Airport, Field Operations, and Investigations. The Field Operations Bureau manages the Patrol Division of the SFPD. The Patrol Division is divided into two groups: the Metro Division and the Golden Gate Division, both supported by Field Operations Branch headquarters staff. Between the two, the Metro and Golden Gate Divisions oversee the ten district stations and the Traffic Company. The Metro Division encompasses downtown, while the Golden Gate Division is comprised of district stations encompassing the outer areas and neighborhoods of San Francisco, including Richmond, Sunset, Outer Mission, Ingleside, Excelsior, Bayview, and Hunters Point.

Specifically, the Project Area is served by the Bayview Police Station, located at 201 Williams Avenue, which opened in February 1997. Covering one of the largest areas, the Bayview Police District extends along the eastern edge of McLaren Park (Cambridge Street) to the bay and south from Channel Street to the San Mateo county line.¹

As of 2004, the SFPD had approximately 2,300 sworn officers citywide.² With an estimated population of approximately 756,967 residents in the City of San Francisco, there are approximately 2.9 officers per 1,000 residents. Specific to the Project Area, there are approximately 100 sworn personnel in the Bayview Station³ with approximately 26,249 residents in the Project Area.⁴ Thus, the current level of service in Project Area is approximately 3.8 officers per 1,000 population. To ensure that the SFPD continues to serve the community effectively, the Mayor's 2004-2005 budget includes funding to hire 40 new police officers. The budget also places additional patrol officers in several of the city's public housing projects to improve community policing and help protect those areas from violent crime.

Table III.O-1 illustrates crime statistics for the Bayview District. As shown, although there were approximately 5 percent fewer crimes within the district in 2003 as compared to 2002, the general trend indicates that crimes have risen each year since 2000.

The Bayview Station currently provides a number of community outreach programs and crime prevention activities for the Bayview Hunters Point area. The SFPD holds monthly meetings at each police station, including the Bayview Station, to address current issues of concern, upcoming events, crime rates, etc. The meetings are also used as workshops for general issues or topics of the month, such as child abuse and domestic violence, and experts are brought in to speak to the community about these subjects. In addition, there are various neighborhood safety watch programs within the community that assist police with crime prevention and neighborhood protection.

TABLE III.O-1
Bayview Part 1 Crimes: Year-to-Date Comparison

Part 1 Crimes	2000¹	2001¹	2002¹	2003²
Homicide	11	19	21	23
Rape	23	18	20	21
Robbery	416	355	373	338
Aggravated Assault	332	338	340	325
Burglary	709	602	608	668
Auto Boosting	814	878	1060	935
Larceny	681	629	771	688
Motor Vehicle Theft	814	968	921	924
Part 1 Totals	3800	3807	4114	3922

Source:

1. SFPD website, Monthly Crime Statistics by District, accessed April 8, 2004.
2. SFPD Annual Report, 2003.

Fire Protection

The San Francisco Fire Department (SFFD) serves approximately 791,600 citizens residing in San Francisco and approximately 1.2 million people during the business day.⁵ The SFFD comprises 42 engine companies, 18 truck companies, 18 medic units (ambulances), two rescue squads, two fireboats, two service squads, one CO₂ unit, one cliff rescue unit, one hazardous materials unit, three wildland firefighting mini-pumpers, two high pressure hose tenders, three hose tenders, and one utility searchlight unit with approximately 1,700 firefighting and emergency medical field personnel.⁶ Engines are staffed with one officer and three firefighters, and trucks are staffed with one officer and four firefighters. The companies are made up of three divisions, which are further divided into ten battalions. Fire stations are strategically and geographically located throughout the City. In addition, a separate division of the department with three firefighting companies is located at San Francisco International Airport.⁷

The Project Area is served by Division Three of the SFFD. First responding companies to the Project Area include: Engines 25, 9, and 17; Trucks 9 and 17; Medic 17; Battalion Chief B10; and Engine 36 in hazardous material incidents. Generally, staffing levels are as follows: each engine company consists of one captain or lieutenant, one apparatus operator, one firefighter, and one emergency medical technician (EMT) or paramedic. Similarly, truck companies consist of one captain or lieutenant, one apparatus operator, one tiller operator, one firefighter, and one emergency medical technician. The Hazardous Materials Unit consists of one captain or lieutenant, one apparatus operator, and two hazardous materials-certified firefighters. In addition, the medic unit (ambulance) consists of two paramedics. Thus, in total, there are 29 members of the SFFD that provide first-response service to the project area.⁸

Currently, the SFFD has stated that existing services levels within the Project Area are considered acceptable.⁹ Specifically, with a Project Area population of 26,249 residents, the existing service ratio is about one (1.1) personnel for every 1,000 residents, with average response times to the Project Area between 2.5 to 4.5 minutes after a call has been dispatched.¹⁰

Schools

The San Francisco Unified School District (SFUSD) provides public primary and secondary education in the City and County of San Francisco. SFUSD is comprised of 78 elementary schools, 17 middle schools, and 21 high schools.¹¹ Total student enrollment for the SFUSD is approximately 57,805 and total average daily attendance is 95.3 percent.¹² Parents may request up to seven schools (in order of priority) that they wish their children to attend within the district.^{13 14}

Public schools within the Project Area include five elementary schools (one of which is K-8), one middle school, one charter middle school, and one high school. Public schools in the Project Area and their 2003 – 2004 enrollments and capacities are shown in Table III.O-2.

TABLE III.O-2
SCHOOLS SERVING THE PROJECT AREA, 2003 – 2004 ENROLLMENT

Schools ¹	Student Enrollment ²	Approximate Capacity ³ (without temporary classrooms)	Percent of Capacity
Elementary Schools (K-5)			
Bret Harte	321	410	78
Dr. Charles Drew	230	343	67
George Washington Carver	292	410	71
Malcolm X Academy	237	361	66
21 st Century Academy (K-8)	236	198	119
Middle Schools (Grades 6-8)			
Gloria R. Davis	191	526	36
Kipp Bayview Academy (Charter School) ⁴	85	300 ⁵	28
High School (Grades 9-12)			
Thurgood Marshall	1,005	1,058	95
TOTAL	2,597	3,606	72

Sources:

¹ Lisa Kline, SFUSD Facilities Department, personal communication, April 8, 2004.

² SFUSD website, School Profiles 2003-2004 (Fall 2003), accessed April 26, 2004.

³ SFUSD website, SFUSD Facilities Master Plan, 2002.

⁴ Started in 2003 with 85 fifth graders; one grade will be added each year until it becomes a 5th-8th grade school

⁵ This number is based upon the projection of approximately 300 students in 2007 school year, as stated on www.kippbayview.org

Note: Capacity is based upon target permanent capacity rather than target capacity with temporary classrooms.

On a district-wide basis, current enrollment at the elementary school level is very close to the recommended capacity without temporary classrooms, under capacity by approximately 0.2 percent. However, approximately one half of all elementary schools appear to be over enrolled when compared to the recommended capacity without temporary classrooms.¹⁵ For schools in the Project Area, one of the elementary schools, 21st Century Academy, is over capacity, as shown on Table III.O-2.

The number of temporary classrooms varies substantially from site to site, as many elementary schools have no temporary classrooms at all. Several schools, however, have more than one

third of their classes housed in temporary classrooms, and several more have more than half. The sizes and numbers of permanent facilities such as library/media centers, cafeteria/food service spaces, theater/auditorium, physical education facilities, and restrooms are not usually increased accordingly when temporary classrooms are added.¹⁶ Thus, Table III.O-2 illustrates the permanent facilities to better show the actual dynamics of the school enrollment levels.

At the middle school level, there is currently excess capacity of approximately 18 percent within the district as a whole, and approximately 67 percent excess capacity within the Project Area. Similar to the elementary school level, on a district-wide basis, current enrollment at the high school level is very close to the recommended capacity without temporary classrooms, under capacity by only 0.2 percent. However, approximately one half of all high schools appear to be over enrolled when compared to the recommended capacity without temporary classrooms.¹⁷

Generally, the SFUSD has excess capacity at its school facilities, with the majority of this occurring at the middle school level. As indicated in the SFUSD Facilities Master Plan, the enrollment projections for the next ten years indicate a decline in student enrollment, and thus, a corresponding increase in excess capacity. Specifically, the ten year enrollment projections, in conjunction with the capacity study of the SFUSD Facilities Master Plan, forecast excess capacity of nearly 7,600 seats on a district-wide basis. The bulk of the excess capacity is expected to occur at the middle school level.¹⁸

As a result of the anticipated decline in student enrollment over the next ten years, the Facilities Master Plan indicates that future funding will be allocated for District-wide school upgrades rather than new construction. It should be noted that while SFUSD has no current plans to build new schools within the Project Area, members of the community in the Project Area have frequently lobbied for a community high school, potentially located in the Town Center Activity Node.¹⁹

Libraries and Community Centers

Residents in the Project Area are served by the Bayview/Anna E. Waden branch of the San Francisco Public Library. Located within the business corridor of the Project Area at 5075 Third Street on the corner of Third Street and Revere Avenue, the library is within the Town Center Activity Node. Constructed in 1969, the Bayview library branch houses approximately 32,000 volumes of books.²⁰

Outside of the African American Center at the Main Library, the Bayview library branch houses the largest African American Interest Collection in the San Francisco Public Library system, as well as small collections of Chinese and Spanish language materials. In addition, the Bayview library branch has one of the more significant teen collections in the San Francisco Public Library system. As part of the library's Youth-at-Risk project, the branch received funds to create a teen center in 1991. An underutilized area off of the adult reading room was converted to a room where teens can read their books and magazines, as well as listen to music in the listening center.

In November 2000, San Francisco voters passed Proposition A, the \$105.9 million Branch Library Improvement Program. Combined with other state and local public and private fund sources, this program was designed to renovate 19 branches (including the Bayview/Anna E. Waden branch), replace four leased facilities with City-owned branches, and construct a new branch in Mission Bay. With these appropriated funds, construction activities (expansion and interior remodeling) at the Bayview library branch are anticipated to begin in 2008. Currently, there are preliminary plans to make the entire building more accessible and bring it up to code standards. Accessibility improvements will include a new entry ramp and elevator to make the first and second floor fully accessible, and signage will be introduced throughout the library. In addition, the mechanical and electrical systems will be cleaned and inspected for potential code upgrades, and fire egress and alarm systems will be improved to meet current life safety and code requirements. Building materials will be tested for the presence of asbestos or lead containing materials for possible mitigation measures. Additionally, the entire first floor will be renovated to include a new elevator, new restrooms, and more efficient storage and janitor closets. On the second floor, the existing restroom will be enlarged and

existing lighting systems will be enhanced. Existing counters and office areas will be reconfigured to make more efficient use of staff areas. Air circulation in areas with no windows will be improved, and the meeting room will be updated with data/electrical outlets and media presentation equipment.²¹

In addition to the Bayview library branch, the Project Area is served by the Southeast Community Facility (SECF). The SECF was established in 1987 by the City as a mitigation measure in return for Bayview Hunters Point's acceptance of the SWPCP in the midst of their neighborhood. The SECF is intended to further the gainful employment of residents in the community; create opportunities for them to participate in educational programs; establish and expand opportunities for children's daycare; and provide information and resources for the enhancement and growth of the community as a whole.

Located at 1800 Oakdale Avenue, the SECF is a multi-tenant community center which serves the needs of the Project Area and the Southeast sector of the City. Many programs and services are available, including an educational/training complex, which is leased by San Francisco Community College District, Southeast Campus, and sublet by: Renaissance Parents of Success Program; Community Scholars of Success; New Directions; Office of Samoan Affairs; and Department of Human Services—One Stop Career Center. In addition, public meeting rooms and common areas, a daycare, and community organizations such as Bayview Hunters Point PAC are located at the facility.

Parks

Park District 10, which encompasses all of Bayview Hunter's Point, has 22 parks totaling 128.16 acres.²² The natural open space and park areas in the Project Area include Bayview Playground, Bayview Park, Hunters Point Shoreline Park, many smaller neighborhood pocket parks, and the Candlestick Point State Recreation Area at the southern end of the project area.

The San Francisco Recreation and Park Department owns and manages over 3,300 acres of open space in the City and County of San Francisco. The combined City, state, and federal property permanently dedicated to open space totals approximately 4,090 acres, or 5.5 acres

per 1,000 San Francisco residents. This is about half the established standard set by the National Park and Recreation Association (NPRA), which calls for 10 acres of open space per 1,000 population in cities. Given the City's existing development patterns, high population density, and small land mass (28,918 acres), the NPRA standard will never be possible. The City attempts, however, to increase the per capita supply of open space whenever possible.²³

The San Francisco *Planning Code* does not have a citywide standard for open space, but the City's Sustainability Plan has a goal of 5.5 acres of open space per 1000 residents. The standards for open space in San Francisco's *General Plan* relate only to new development. There is no goal for open space relating to each district.

UTILITIES

Water Supply and Distribution

The SFPUC is a department of the City and County of San Francisco that provides water, wastewater, and municipal power services to San Francisco. Under contractual agreement with 29 wholesale water agencies, the regional water supply system of the SFPUC provides water to 2.4 million people in San Francisco, Santa Clara, Alameda and San Mateo counties.²⁴

Eighty-five percent of the water delivered to SFPUC customers comes from Sierra Nevada snowmelt stored in the Hetch Hetchy reservoir situated on the Tuolumne River in Yosemite National Park. The Hetch Hetchy water travels 160 miles via gravity from Yosemite to the San Francisco Bay Area. The remaining 15 percent of water comes from runoff in the Alameda and Peninsula watersheds. This "local" water is captured in reservoirs located in San Mateo and Alameda Counties.²⁵

According to the San Francisco Urban Water Management Plan (UWMP), groundwater aquifers within San Francisco are generally rated as inadequate with regard to quantity by the U.S. Geological Survey (USGS). There is essentially no groundwater available in the eastern half of the city and some development potential in the western half.²⁶

In the eastern half of San Francisco, the great majority of aquifers are less than 100 feet thick and nearly all are less than 2000 feet thick. These aquifers consist predominantly of low permeability dune sand, bay mud and clay. Besides constraints on groundwater development in this area from thin aquifers and low permeability, extensive groundwater contamination from nitrates and other constituents has been detected. Currently, some isolated use of groundwater by individual users occurs in the eastern portion of San Francisco for such non-potable purposes as laundry supply.²⁷

The western half of the city generally has more favorable groundwater available, as compared to the eastern portion of the city. Historic groundwater use has occurred in the Golden Gate Park Area, the Sunset District, and the Lake Merced Area, which all have some areas where aquifer thickness is greater than 300 feet. Typically, the groundwater within these areas are used for non-potable uses such as park irrigation, zoo supply, and golf course landscaping. This groundwater averaged slightly less than 2 million gallons per day (mgd).

The regional water system consists of over 280 miles of pipelines, over 60 miles of tunnels, 11 reservoirs, 5 pump stations, and 2 water treatment plants. In contrast, the local water system provides distribution and storage for water and fire protection within the city. This local system includes 14 reservoirs, 9 water tanks, 17 pump stations and 1,250 miles of transmission lines and water mains within the city.²⁸

The Project Area is served by three reservoirs, including University Mound Reservoir, which has a capacity of 141 million gallons (mg); Hunters Point Reservoir, which has a capacity of 1 mg; and McLaren Park Tanks, with a capacity of 8 mg. In addition, the Project Area is served by two water treatment plants (WTPs), including the Sunol and Harry Tracy WTPs, both located outside of the city.²⁹ The Sunol WTP underwent major plant improvements in 2001, which included the separation of different source waters for efficient treatment, additional chemical storage with new feed pumps, a filter-to-waste system, a pH and alkalinity feed station, a new sludge removal system, a renovated operation and control building, and backwash recovery basins. The Sunol WTP now operates with a maximum capacity of 160 mgd. Likewise, the Harry Tracy WTP is scheduled for construction in 2004 to improve the

existing facilities (primarily the filtration process) so that the WTP can operate at flows greater than 120 mgd for extended periods of time.

Currently, total water use by SFPUC retail customers is estimated to be approximately 90 to 91 mgd,³⁰ while the average daily demand in the Project Area is estimated at approximately 2.33 mg.³¹ Approximately 53 percent of this total is delivered to San Francisco residential customers; non-residential water use accounts for approximately 38 percent; and unaccounted water amounts for approximately 9 percent.³² Projected water demands are shown in Table III.O-3.

**TABLE III.O-3
PROJECTED WATER DEMANDS (MGD)**

Entity	Year				
	Current	2005	2010	2015	2020
San Francisco Customers					
Single-Family	18.8	18.9	18.7	18.3	18.0
Multi-Family	28.8	28.8	28.6	28.0	27.6
Non-residential	27.8	29.1	30.2	31.3	32.0
Other	0.2	0.2	0.2	0.2	0.2
Unaccounted Water	8.3	8.0	8.0	8.0	8.0
Total San Francisco Customers	83.9	85.0	85.7	85.8	85.8
Other Retail and HHWP Customers					
Suburban Retail Customers	4.9	4.8	4.8	4.8	4.8
Groveland Community Services District	0.4	0.4	0.4	0.4	0.4
Lawrence Livermore Laboratory	0.6	0.6	0.6	0.6	0.6
Subtotal Retail and HHWP Customers	5.9	5.8	5.8	5.8	5.8
Total SFPUC Water System Retail	89.8	90.8	91.5	91.6	91.6
Other Water Uses					
Sunol Area/Castlewood	1	1	1	1	1
Golden Gate Park	1	1	1	1	1
Lake Merced Area	1	1	1	1	1
Presidio	1	1	1	1	1

Source: SFPUC, Final Urban Water Management Plan, Table 7, p. 21, February 2001.

Note: HHWP = Hetch Hetchy Water and Power

As shown in Table III.O-3, demands are projected to increase only slightly by the year 2020. Additionally, the forecasted water demands of both the single-family and multi-family residential sectors are projected to be less than current demands. This circumstance occurs as a result of projections that (1) population density within housing units will decline in the future, and (2) market penetration of conservation measures within the residential sectors will increase as time progresses. Together, these two factors will lead to less water use by a slowly increasing population.³³

The SFPUC has indicated that during normal precipitation years, adequate supplies exist to meet its projected retail and wholesale water demands. However, as the SFPUC water demands increase in the future, absent actions to increase system water supplies, customers will be subjected to an increasing risk of water delivery shortage. A single dry year (critical condition) following a normal year could cause the imposition of system-wide water shortages. In addition, multiple dry year drought sequences could subject SFPUC customers to even greater levels of shortage. Thus, during single dry year or multiple dry-year events, the SFPUC system supply available to customers, both retail and wholesale, may be limited.³⁴

However, San Francisco currently has a variety of water demand management measures in place. For example, the City implements measures that include regular investments to replace old, leak-prone mains with new pipe, systematic leak detection programs, and regular meter calibration and repair programs. The result of these activities reduces unaccounted water levels in the City to approximately 6 to 9 percent of the total water production. In addition, the City currently implements a variety of BMPs that encourage water conservation measures.

Solid Waste

Refuse collection is regulated by permits, which are held almost exclusively by Golden Gate Disposal and Sunset Scavenger Companies, both subsidiaries of Norcal Waste Systems, Inc. Sunset Scavenger Company provides residential and commercial garbage and recycling collection services to the Project Area, as well as eight other sections of the city. Discards are delivered to the San Francisco Solid Waste Transfer and Recycling Center, run by Sanitary

Fill Company, which is also owned by Norcal Waste Systems. The transfer station is located in the southeastern portion of the city, just west of the southern boundary of the Project Area. Once sorted and recycled, a majority of the remaining waste that is not diverted is then transferred from the transfer station to Altamont Landfill, located in Alameda County, approximately 62 miles from the City. The remaining waste is hauled to approximately 15 to 20 other landfills in the region.³⁵

In addition to the Sunset Scavenger Company, the San Francisco Recycling Program works with residents and businesses to promote waste prevention, reuse, and recycling throughout the City in order to conserve valuable resources and reduce the amount of material that is sent to the landfill. Program responsibilities include maximizing waste prevention, meeting a state-mandated requirement to divert 50 percent of disposed material from landfills (see Assembly Bill 939 under Regulatory Framework), and matching Alameda County's diversion rate, which is required as part of the agreement with the Altamont Landfill. The program also works with City departments to comply with the City's Resource Conservation Ordinance and to implement other local recycling legislation.³⁶

Statistics for 2002 show that the City kept 63 percent of all wastestream materials from going to the landfill, up from 52 percent the year before. Specifically, the City generated approximately 1,882,490 tons of waste material in 2002. Of this, 702,012 tons went to landfills while 1,180,478 tons were diverted through recycling, composting, reuse, source reduction, and other efforts. The City has met and surpassed the State-mandated diversion rate of 50 percent by approximately 26 percent. This was the outcome of improved recycling efforts in many areas, with the majority of the increase resulting from aggressive recycling and reuse of materials at construction and demolition sites. In addition, the City is well on its way towards attaining the 75 percent goal that was adopted in 2002 by the Board of Supervisors.³⁷

Currently, the Altamont Landfill has approval for expansion through a conditional use permit (CUP), which would provide more than double the fill area as currently permitted. The existing landfill consists of a disposal acreage of approximately 230 acres, while the expansion would provide for another 250 acres of fill area. The total tonnage capacity allowed under the approved CUP is approximately 40 million tons, and would increase the lifespan of the landfill

for another 19 to 28 years. This anticipated lifespan is in addition to the estimated three remaining years at the existing landfill (although the permit is slated to expire in 2005). The CUP would allow for a daily maximum of 11,150 tons per day, while the daily average demand would be approximately 6,154 tons per day. In addition to the approved CUP, a new solid waste facilities permit is anticipated to be approved in summer 2004, which would be consistent with the information in the CUP.³⁸

REGULATORY FRAMEWORK

Federal Regulations

The following federal regulations are applicable to water resources. There are no applicable federal regulations for police, fire, schools, libraries and community centers, or solid waste services.

Water

Clean Water Act

The federal Clean Water Act establishes regulatory requirements for potable water supplies including raw and treated water quality criteria. The City is required to monitor water quality and conform to the regulatory requirements of the Clean Water Act.

Safe Drinking Water Act

The federal Safe Drinking Water Act established maximum contaminant levels or treatment technique standards for drinking water supplies. The listed contaminants include metals, nitrates, asbestos, total dissolved solids, and microbes.

State Regulations

The following state regulations are applicable to water resources and solid waste services. There are no applicable state regulations for police, fire, schools, or library and community center services.

Water

Safe Drinking Water Act (1976)

The California Department of Health Services (CDHS) was granted primary enforcement responsibility for the California Safe Drinking Water Act in Title 22 of the California Administrative Code. Title 22 also stipulates drinking water quality and monitoring standards, which are equal to or more stringent than the federal standards.

Recycled Water Regulations

Within the State of California, recycled water is regulated by the EPA, the SWRCB, the RWQCBs, and the CDHS. The SWRCB has adopted Resolution No. 77-1, Policy with Respect to Water Reclamation in California. This policy states that the SWRCB and associated RWQCBs will encourage and consider or recommend for funding water reclamation projects that do not impair water rights or beneficial instream uses. The CDHS establishes the recycled water uses allowed in the state, and designates the level of treatment (i.e., undisinfected secondary, disinfected secondary, or disinfected tertiary) required for each of these designated uses (Title 22, California Code of Regulations).

The RWQCBs implement the SWRCB's Guidelines for Regulation of Water Reclamation and issue waste discharge permits that serve to regulate the quality of recycled water based on stringent water quality requirements. The CDHS develops policies protecting human health and comments and advises on RWQCB permits.

Title 22

The California Water Code requires the CDHS to establish water reclamation criteria. In 1975, the CDHS prepared Title 22 to fulfill this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: primary effluent, which typically includes grit removal and initial sedimentation or settling tanks; adequately disinfected, oxidized effluent (secondary effluent), which typically involves aeration and additional settling basins; and adequately disinfected, oxidized, coagulated,

clarified, filtered effluent (tertiary effluent), which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 also defines requirements for sampling and analysis of effluent and requires specific design requirements for facilities.

Solid Waste

Assembly Bill 939

The State Legislature, through Assembly Bill 939, the California Integrated Waste Management Act of 1989, mandated that all cities and counties prepare, adopt, and submit a comprehensive solid waste management plan to the county. The plan must address and detail each individual community's efforts and intended policies in the areas of waste characterization, source reduction, recycling, composting, solid waste facilities, education/public information, funding, special wastes, and hazardous wastes. The law also mandates that communities meet certain specific identified targets for percentages of waste reduction and recycling over specific identified targets for percentages of waste reduction and recycling over specified time periods (25 percent by 1995 and 50 percent by the year 2000).

SIGNIFICANCE CRITERIA

For purposes of this EIR, the Project would be considered to have a significant impacts on the environment if it would result in the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- Police protection
- Fire protection
- Schools
- Libraries and community centers
- Parks

In addition, the Project would be considered to have a significant impact if it would:

- require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- result in insufficient water supplies available to serve the project from existing entitlements and resources;
- be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- not comply with federal, state, and local statutes and regulations related to solid waste;
- require or result in the construction of new school facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new community facilities or parks or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- require or result in the construction of new water treatment or expansion of existing facilities, the construction of which could cause significant environmental effects.

PROGRAM EFFECTS

The change in population associated with the Project is 20,896 residents (related to 6,146 households/housing units with no vacancies), which is a substantial difference from the 2025 Base of 2,815 residents. The change in jobs associated with the Project is 5,523 employees, about 66 percent of the 8,375 jobs expected in 2025 Base Case. These Study Area numbers are larger than those identified in Section 2, Project Description (which identifies 3,700 households/housing units and 5,308 job/employees), as the Project Area is smaller than the Study Area.

Police Protection Impacts

Development under the Project could include approximately 6,146 new residential units in the Study Area by 2025. In addition, implementation of the Project could result in an increase of approximately 2.4 million square feet (sf) of new floor area including 115,000 sf of institutional uses, 50,000 sf of medical uses, 220,000 sf of professional office uses, 425,000 of light industrial uses, 1.6 million sf of commercial retail uses, and 5,000 sf of hotel uses. This

increased intensity of uses in the Project Area could potentially increase the service calls to the SFPD and would require increased crime prevention activities and additional policing of the Project Area. In addition to the increased service requests anticipated as a result of the increased population projected by the Project, the additional commercial-retail businesses that are anticipated as a result of the Project may also create a need for a small-scale storefront police service facility, such as foot and bike patrol services to better serve localized areas.

As discussed previously, as of July 2004, the SFPD had approximately 100 sworn personnel in the Bayview Station and maintained a ratio of 3.8 sworn personnel per 1,000 City residents based on the 26,249 residents in the Project Area. Implementation of the Project (6,146 residential units) would increase the residents within the Project Area by approximately 20,896 persons. In order to maintain the service ratio of 3.8 sworn personnel per 1,000 City residents and meet the needs of the City, the SFPD would need to provide an additional 80 officers (79.4) under the Project buildout by 2025.

The ability of the SFPD to support the needs of future growth is dependent upon its financial ability to hire additional sworn personnel. As stated previously, the Mayor's 2004-2005 budget includes funding to hire 40 new police officers within the SFPD. Although it is currently unknown what stations these new officers will be assigned to, it is assumed that this increase and other potential increases in sworn personnel could be assigned to the Bayview Station as a result of project implementation. Since the existing Bayview Station was constructed in 1997, it is assumed that this facility would be able to provide adequate space for some of the additional 80 sworn officers that would be needed as a result of the Project buildout. However, this increase in personnel and likely related increase in police facilities is a less-than-significant impact as new development would be subject to impact fees that could be used to construct new facilities.

Further, it should be noted that in as much as the SFPD bases its future growth and projections upon the Association of Bay Area Governments (ABAG) projections, the population increase as a result of the Project has already been assumed under the ABAG 2025 projections for the City as a whole. In addition, if successful, the Project would eliminate blight that is currently prevalent in the area through the development of affordable housing; provisions for retail,

commercial, and community space; and overall economic and community enhancement. These physical improvements could help lessen illegal activities through the introduction of new residents and a revitalized commercial district along Third Street.

Fire Protection Impacts

Development under the Project would result in a total of 2.4 million sf of commercial, light industrial, hotel, and office uses, as well as approximately 3,700 new residential units (6,146 within the Study Area). With the projected increase of approximately 20,896 residents because of Project implementation, the total population in the Project Area at build-out would be approximately 47,145 residents. Thus, with the projected increase, the service ratio for the SFFD would be approximately 0.6 firefighters for every 1,000 persons, which is considered an acceptable level of service.³⁹ This increase in the intensity of uses in the Project Area would increase the demand for fire protection services within the area. As discussed previously, the Project Area is located within the southeastern part of San Francisco, and is served by Division Three of the SFFD. The SFFD does not have adopted standards or performance objectives for response times or service ratios. However, development associated with the Project would be required to comply with all regulations of the 2001 California Fire Code, which establishes requirements pertaining to fire protection systems, including the provision of state-mandated smoke alarms, fire extinguishers, appropriate building access, and emergency response notification systems. As stated previously, the SFFD currently maintains average emergency response times with existing equipment of approximately 2.5 minutes to 4.5 minutes to the Project Area. The SFFD has stated that the existing fire protection services in the Project Area are adequate, and that development under the Project could cause delays in response due to traffic concerns and added call volume.

SFFD's ability to support the needs of future growth is dependent upon its ability to secure sites for construction and equipment for new fire stations in a timely manner. In general, the provision of fire stations varies more as a function of the geographic distribution of structures than of population increases. One of the most important criteria for effective firefighting is the response time needed to reach the site of the fire. Existing stations are strategically located to ensure adequate service within the Project Area. Nevertheless, additional development at

buildout under the Project would increase the number of residents and employees residing in the Project Area, as well as increase the total number of structures. In addition, implementation of the Project could cause delays in response times due to traffic concerns and added call volume. Based on the potential for increased medical calls, responses to alarms, and increased traffic in the area, the SFFD has stated that another ambulance and possibly another engine company would be necessary to serve the Project Area.⁴⁰ However, as also noted by the SFFD, Project Area redevelopment and associated revenues would constitute a contributory impact on the city as a whole, as future revenues could be used to help maintain firehouses in the area if deemed necessary by the City. This, combined with the relatively dispersed and incremental nature of proposed development, would result in a less-than-significant impact on fire services. In addition, developer impact fees would be assessed that could be used to construct new facilities.

The quantity of water required for fire protection (i.e., fire flows) varies and is dependent upon many factors that are specific to each particular building, such as the floor area, type of construction, expected occupancy, type of activities conducted within the building, and the distance to adjacent buildings. Due to the possibility of a fire occurring on any given day, the required fire flow in the Project Area must operate with maximum-day demands occurring elsewhere throughout the water system. Since project-specific fire flows and fire-flow demand rates are not currently available, this analysis relies on a worst-case scenario, or maximum demand of fire flow requirements, as found in Appendix IIIA of the California Fire Code. The maximum fire flow that any structure or project site would require is 8,000 gallons per minute (gpm) for a duration of four hours. It should be noted that exceptions to this occur when the building is provided with an approved automatic sprinkler system, in which a reduction of 75 percent of the fire flow is allowed.⁴¹ As such, with the provision of sprinkler systems for structures throughout the Project Area, the maximum fire flow required would be 2,000 gpm. However, all development plans would be reviewed by the SFFD prior to construction to ensure that adequate fire flows would be maintained (including localized pipe upgrades or connections that might be required to connect new buildings to the system), and that an adequate number of fire hydrants would be provided in the appropriate locations in

compliance with the California Fire Code. Therefore, although the existing fire flows are unknown, adequate fire flows would be required by law prior to construction.

As discussed previously, implementation of the Project would eliminate blight that is prevalent in the area through the construction and rehabilitation of structures, and through improvements such as transit opportunities and accessible open space. The potential beneficial impacts on fire department services as a result of project implementation are two-fold; 1) the removal and replacement of structurally substandard buildings would reduce the potential for structural fire hazards, and 2) the overall economic and housing development of the Project would facilitate the reduction in crime and drug-related problems in the Project Area. Thus, the need for fire protection and emergency medical services would be expected to be reduced.

In addition, any new development that would occur under the Project would be required to comply with all applicable federal, state, and local regulations governing the provision of fire protection services. As such, implementation of the Project would provide adequate emergency medical services and levels of service associated with fire protection. Impacts associated with the provision of fire protection services would be less than significant.

School Impacts

The SFUSD provides school services to the Project Area. Currently, the SFUSD has five elementary schools, two middle schools (one charter), and one high school that provide school services to Project Area residents.

As shown in Table III.O-2, the total capacity for SFUSD existing school facilities serving Project Area residents is 3,606 students. Total student enrollment for the 2003-2004 school year for schools within the SFUSD serving Project Area residents was 2,597 students. Therefore, the District's student enrollment was under capacity for this school year by 1,009 students, and operating at approximately 72 percent capacity.

In order to determine the potential impact on the SFUSD as a result of the Project, student generation rates were used to estimate the increase in students within the SFUSD. Based on the student generation rate of 0.203 students per new housing unit, which is used by the

SFUSD for planning purposes,⁴² the number of students that could potentially be added to the Study Area would be approximately 1,248 (with an increase of 6,146 residential units).

The increase of approximately 1,248 students within the SFUSD in the Study Area would increase enrollment in the schools serving the project area to approximately 3,845 students, which could reach the existing capacity of these schools. As this is a conservative analysis of the Study Area, and the SFUSD anticipates a decrease in the student population over the next ten years, new or expanded school facilities are not anticipated to be required as a direct result of implementation of the Project. In addition, as discussed in the SFUSD Facilities Master Plan, enrollment is anticipated to decrease over the next ten years and result in an increase in excess capacity, which would ensure that the additional students resulting from implementation of the Project would be provided with sufficient educational facilities to meet their academic needs.

With the anticipated increase in excess capacity throughout the SFUSD over the next ten years, impacts to school services are considered a less-than-significant impact within the Study Area.

Library and Community Center Impacts

With implementation of the Project, it is anticipated that approximately 20,896 residents with an associated 6,146 dwelling units would occur at buildout. This increase in residents would substantially intensify the demand for library services and facilities as well as community centers, and may require new construction. As stated in the San Francisco Public Library Strategic Plan (2003-2006), there is no national standard for library service. Instead, each library must evaluate how it may best meet the needs of the community. To this end, the San Francisco Public Library has developed a Strategic Plan that provides every library facility and program with a unifying organizational vision and system-wide goals. These goals are broad and flexible enough to tailor services to each unique neighborhood. The Strategic Plan also provides a framework to consider opportunities for new programs and services.⁴³

As stated previously, the Branch Library Improvement Program, which is currently underway, will renovate 19 branches, replace four leased facilities with City-owned branches, and construct a new branch in Mission Bay. Thus, because the Bayview/Anna E. Waden library branch is included in this planned upgrade, and because the Strategic Plan outlines continuous measures to maintain and improve the existing library facilities for the surrounding communities, it is anticipated that the upgraded facilities would be able to accommodate the increase in residential population as a result of the Project.

In addition, new development would contribute revenue from property taxes to the City fund, which could be used to fund library services, if the City deemed necessary. In addition, new development would also be subject to development impact fees that could be used to construct new library facilities or expand existing libraries. As such, impacts associated with library services would be less than significant.

Parks

Development under the Project would include approximately 6,146 housing residential units by 2025, resulting in approximately 20,000 new residents. The increase in residents would likely intensify the demand for park services and facilities. New development would contribute revenue from property taxes to the City fund, which could be used to fund expanded park services, if the City deemed necessary. In addition, the Project establishes initiatives to increase open space and recreation opportunities. The Community Enhancements Program includes the Framework Open Space Program, which would guide the improvement, maintenance, and programming of publicly-owned open space in the area, in concert with the Recreation and Park Department and other local and state agencies regarding other open space resources in the Bayview Hunters Point area. The Framework Open Space Program would provide a mechanism to manage the long-term maintenance, enhancement, and development of the community's open space and recreation system and would guide existing and new open spaces in the community.

Another recreational component of the Project is the Bayview Connections Urban Open Space Project being developed by MUNI and the Department of Public Works. The project involves

pedestrian and streetscape improvements that would enhance the linkages between transit, retail, neighborhood services, and cultural facilities in the center of Bayview Hunters Point. The first phase is anticipated to begin in the fall of 2004, which would add to the Bayview Hunters Point's formal public open space by reclaiming the existing Mendell Street public right-of-way between Oakdale and Palou Avenues as a pedestrian-only space. Therefore, the Project would have either no adverse impact or a potential beneficial impact on parks and recreational services in the Project Area.

Water Supply Impacts

Senate Bills 221 and 610 require a water provider to furnish substantial evidence that adequate water supplies would be available to meet the water demands of new customers through normal and single-dry and multiple-dry years for a 20-year period. This evidence is established in a project-specific water supply assessment (WSA) or an Urban Water Management Plan. The Project would include development of about 2.4 million square feet of mixed uses. New population in the Project Area would include about 20,896 new residents and about 5,308 net new employees. Water generation factors in the Urban Water Management Plan are based on population with 60 gallons per day for residents and 35 gallons per day per employee for all commercial and institutional uses. At build-out in 2025, all development due to implementation of the Project would use about 1,439,540 gallons per day of water. Development and population growth associated with the Project would be within the ABAG Year 2000 Projections, and as such, the project would not be required to obtain a water assessment from the SFPUC.⁴⁴ Because the Project would be within expected growth projections for the City, less-than-significant water supply impacts are anticipated.

Wastewater Impacts

The Project would create about 2.4 million square feet of mixed uses. Generation factors from the 1998 Mission Bay Subsequent Environmental Impact Report were used to determine daily wastewater demand for the Project. At buildout in 2025, all development would generate approximately 940,336 gallons of wastewater per day, as presented in Table III.O-4.

Because the Project would be within expected growth projection for the City, less-than-significant impacts on wastewater treatment capacity are anticipated.

TABLE III.O-4
NEW BUILDING SPACE AND RESIDENTIAL UNITS
AND ASSOCIATED WASTE WATER GENERATION BY INDUSTRY, 2000 – 2025¹

Industry	Building Space	Water Demand Factor	Daily Wastewater Generation (gal) ²
Cultural/Institutional/ Educational	115,000 sf	150 gal/1,000 sf	15,525
Medical and Health Services	50,000 sf	150 gal/1,000 sf	6,750
Management and Information Professional Services	220,000 sf	95 gal/1,000 sf	18,810
Production, Distribution, Repair	425,000 sf	150 gal/1,000 sf	57,375
Retail and Entertainment	1,591,850 sf	150 gal/1,000 sf	214,900
Visitor Lodging	5,000 sf ³	170 gal/du	2,601
Residential	3,700 du	187.5 gal/du	624,375
TOTAL			940,336

Source: Mission Bay Subsequent Environmental Impact Report, Mission Bay Solid Waste Generation at Buildout, Table L.3, 1998.

- Notes:* 1. Includes only the area within the Project Area boundary.
 2. Wastewater generation assumed to be 90% of water consumption.
 3. Visitor lodging is equivalent to 1 person per 300 sf, or about 17 rooms.

Solid Waste Impacts

Residents in the Project Area would be expected to generate approximately 9,250 pounds of solid waste per day, and approximately 3,376,250 pounds per year (365 days). The Project Area is expected to have 2.4 million square feet of development, which would be expected to generate 39,971 pounds per day and 10,392,460 pounds per year (260 weekdays) of solid waste, as presented in Table III.O-5.

In 2002, San Francisco generated a total of 1,882,490 tons of solid waste, of which 702,012 tons (or 37 percent) were disposed of in the Altamont Landfill and 1,180,478 tons (or 63 percent) were diverted from the solid waste stream through recycling, composting, reuse, source reduction, and other efforts. It is anticipated that the City will continue to improve

solid waste service, in order to achieve the recycling goal of 75 percent by 2010, as adopted by the Board of Supervisors in 2002. In addition, the Altamont Landfill is assumed to remain operational for another 19 to 28 years, with an increase of 250 acres of fill area under the expansion plan.

TABLE III.O-5
NEW BUILDING SPACE AND RESIDENTIAL UNITS
AND ASSOCIATED SOLID WASTE GENERATION BY INDUSTRY, 2000 – 2025¹

Industry	Building Space (Sq. Ft.)	Solid Waste Factor	Daily Waste Generation (lbs)
Cultural/Institutional/Educational	115,000	1 lb/100sf/day	1,150
Medical and Health Services	50,000	1 lb/100sf/day	500
Management and Information	220,000	1 lb/100sf/day	2,200
Professional Services			
Production, Distribution, Repair	425,000	1 lb/100sf/day	4,250
Retail and Entertainment	1,591,850	2 lbs/100sf/day	31,837
Visitor Lodging ²	5,000	2 lbs/room/day	34
Residential	3,700	2.5 lbs/res/day	9,250
TOTAL			49,221

Source: Mission Bay Subsequent Environmental Impact Report, Mission Bay Solid Waste Generation at Buildout, Table L.2, 1998.

Notes:

1. Includes only the area within the Project Area boundary.
2. Visitor lodging is equivalent to 1 room per 300 sf, or about 17 rooms.

An expansion to the Altamont Landfill was recently approved through a CUP, and a new solid waste facilities permit is anticipated to be approved in summer 2004, extending the facility's lifespan and increasing the landfill capacity by 40 million tons. Thus, the solid waste disposal demand within the City can be met through 2026, at the very least, once expansion of the Altamont Landfill occurs.

Because of the presumed increase in solid waste recycling and the proposed landfill expansion in size and capacity, the impacts on solid waste from implementation of the Project would be less than significant. Further, the City has achieved a 63 percent diversion rate in 2002, and remains committed, through existing regulations such as the Resource Conservation Ordinance

and other local recycling legislation, to continue existing waste reduction and minimization efforts. Therefore, implementation of the Project would be consistent with Assembly Bill 939, and potential impacts would be less than significant.

NOTES – *Public Services and Utilities*

- ¹ San Francisco Police Department, *Monthly Crime Statistics by District*, www.sfgov.org/site/police_index, accessed April 8, 2004.
- ² Dwayne Tully, Public Affairs Officer, SFPD, personal communication, July 7, 2004.
- ³ Ibid.
- ⁴ The Census reports 33,805 residents in Bayview; the SFCTA model assume 26,249 residents. For purposes of this EIR, existing service levels will be based on the smaller number which will amplify the impact of the Project and thus represent a conservative comparison.
- ⁵ San Francisco Fire Department website, www.ci.sf.ca.us/fire/, Fire Facts page.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ Paul H. Chin, Fire Marshal, SFFD, personal communication, August 3, 2004.
- ⁹ Ibid.
- ¹⁰ Paul H. Chin, Fire Marshal, SFFD, written communication, May 26, 2004.
- ¹¹ SFUSD, *Information about our Schools*, <http://orb.sfusd.edu/schdata/schdata.htm>, accessed April 7, 2004.
- ¹² SFUSD, *School Profiles 2003-2004 (Fall 2003)*, <http://orb.sfusd.edu/profile/prfl-100.htm>, accessed April 25, 2004.
- ¹³ SFUSD Public Relations personal communication, July 6, 2004.
- ¹⁴ Paul Cardoni, Interim Director of Construction, SFUSD, phone conversation with EIP Associates, June 4, 2001.
- ¹⁵ SFUSD Facilities Master Plan, Capacity Analysis, 2002.
- ¹⁶ Ibid.
- ¹⁷ Ibid.
- ¹⁸ Ibid.
- ¹⁹ Rhoda Parm, Director of Facilities Dept., SFUSD, personal communication, July 6, 2004.
- ²⁰ Bayview Branch Library, personal communication, July 6, 2004.
- ²¹ San Francisco Public Library website, Facilities Survey – Bayview/Anna E. Waden Branch, accessed April 26, 2004.
- ²² Neighborhood Parks Council, December 2003.
- ²³ Robert McDonald, Project Manager, Capital Division, San Francisco Recreation and Park Department, personal communication, April 7, 2003.
- ²⁴ SFPUC website, www.sfwater.org, accessed April 22, 2004.

- ²⁵ Ibid.
- ²⁶ SFPUC, Final Urban Water Management Plan, February 2001, p11.
- ²⁷ SFPUC, Final Urban Water Management Plan, February 2001.
- ²⁸ SFPUC website, www.sfwater.org, accessed April 22, 2004.
- ²⁹ Diane Parker, Public Relations Officer, SFPUC, written communication, April 30, 2004.
- ³⁰ SFPUC, Final Urban Water Management Plan, February 2001, p.11.
- ³¹ Diane Parker, Public Relations Officer, SFPUC, written communication, April 30, 2004.
- ³² SFPUC, Final Urban Water Management Plan, February 2001, p.18.
- ³³ SFPUC, Final Urban Water Management Plan, February 2001, p. 20.
- ³⁴ SFPUC, Final Urban Water Management Plan, February 2001, p. 20.
- ³⁵ SF Environment: www.sf.org/sfenvironment/facts/sfwaste.htm, accessed April 7, 2004.
- ³⁶ SF Environment: www.sf.org/sfenvironment/aboutus/recycling/, accessed April 27, 2004.
- ³⁷ SF Environment press release, "San Francisco achieves 63 percent recycling, lowest disposal since 1995," April 14, 2004.
- ³⁸ Melissa St. John, Environmental Coordinator and Regulation Specialist at Altamont Landfill, personal communication, April 27, 2004.
- ³⁹ Paul H. Chin, Fire Marshall, SFFD, personal communication, August 3, 2004.
- ⁴⁰ Paul H. Chin, Fire Marshall, SFFD, written communication, May 26, 2004.
- ⁴¹ 2001 California Fire Code, Appendix III-A, Section 5—Fire-Flow Requirements for Buildings.
- ⁴² *Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project*, p. 5-39, US Department of Transportation, October 2002.
- ⁴³ San Francisco Public Library Strategic Plan 2003-2006.
- ⁴⁴ Paul Maltzer, Environmental Review Officer, San Francisco Planning Department, written communication, October 14, 2004; Ellen Levin, Planning Division, SFPUC, written communication, October 2004.

P. ENERGY

This section identifies existing energy use in the Project Area and energy plans and policies applicable to the Project. Impacts associated with increased energy consumption are also presented.

SETTING

CITY AND COUNTY OF SAN FRANCISCO

The general energy demand for the City and County of San Francisco and the greater Bay Area is described here in terms of the major consumed forms of the energy available to the region. In general, energy demand is described in terms of demands for electricity, natural gas, gasoline fuel, and diesel fuel. Consumer use of other fuels or alternative energy sources is small by comparison and not quantified here.

In 2000, the City and County of San Francisco consumed approximately 6,000 gigawatt-hours (GWh) of electricity annually and approximately 27 million British thermal units (MMBtu) of natural gas annually. Electricity demand state-wide and in the City tends to grow at approximately 1 to 2 percent per year. Natural gas consumption is expected to grow similarly, but actually peaked for San Francisco in 1989 at approximately 32 MMBtu and has not yet returned to that level. Transportation-related activity in the region consumes approximately 2,600 million gallons of gasoline annually and 400 million gallons of diesel fuel annually. The gasoline and diesel fuel use for transportation activity in the region is approximately equivalent to an annual 390 MMBtu of energy consumption.

PROJECT AREA

Major energy consumers in the Project Area include industrial land uses such as the Hunters Point Power Plant, the SWPCP, cement plants, repair shops, and numerous other industrial uses. To a lesser extent, commercial and residential land uses also consume energy. Lighting

for night games at Candlestick Stadium consumes large amounts of electricity. In addition, street lighting in the Project Area, typical of developed urban areas, also consumes energy.

PG&E is currently in the process of closing the Hunters Point Power Plant. In 1998, PG&E finalized an agreement with the City of San Francisco to shut down the facility as soon as state regulators and other authorities deemed it was no longer needed to maintain electric reliability. Since then, PG&E has been working to gain approval from the state authorities that regulate the electric grid to develop new transmission power lines and pursue other measures that would make the shutdown of the plant possible. However, as PG&E awaits approval from the state to shut the plant down, they continue to make investments to reduce the plant's air emissions, remove unnecessary fuel oil tanks, resolve health and safety concerns, and keep the neighbors informed.

REGULATORY FRAMEWORK

California Energy Plans and Policies

New and remodeled buildings in California are regulated by the Energy Efficiency Standards for Residential and Non-residential Buildings, Title 24, Part 6 of the California Code of Regulations. These standards apply to new construction of both residential and non-residential buildings and regulate the use of energy for heating, cooling, ventilation, water heating, and lighting. New buildings must also comply with the requirements of the Uniform Building Code which requires specific energy saving measures such as insulation, window glazing, weather sealing, choice of building materials, and water- and energy-conserving plumbing fixtures.

The California Energy Resources Conservation and Development Commission is currently considering applications for the development of new power-generating facilities in San Francisco, the Bay Area, and elsewhere in the state. These facilities could supply additional energy to the power supply grid within the next few years. These efforts, together with conservation, will be part of the statewide effort to achieve energy efficiency.

San Francisco Energy Plans and Policies

The Environmental Protection Element of the *San Francisco General Plan* contains the City's objectives and policies for energy management.

The Environmental Protection Element has the following goals for energy efficiency: (1) to increase the efficiency of local energy use; (2) to diversify the present balance of resource supplies to meet local energy needs; (3) to foster the economic development of energy management services and renewable energy systems; and (4) to encourage the active participation of members of the community in carrying out this program. The South Bayshore Area Plan of the *General Plan* focuses on energy management within the Project Area. Relevant policies are summarized below.

- **Policy 17.1** Promote the South Bayshore as an area for implementing energy conservation and alternative energy supply initiatives.
- **Policy 17.2** Strengthen linkages between district energy planning efforts and overall community development goals and objectives.
- **Policy 18.1** Encourage land use patterns which will reduce transportation needs and encourage methods of transportation which will use less energy.
- **Policy 18.2** Enhance the energy efficiency of housing in South Bayshore.
- **Policy 18.3** Promote effective energy management practices in new and existing commercial and industrial facilities to increase energy efficiency and maintain the economic viability of businesses.
- **Policy 18.4** Encourage energy conservation and resource management in community facilities and operations in South Bayshore.

IMPACTS

SIGNIFICANCE CRITERIA

For the purposes of this EIR, the Project would be considered to have a significant effect on the environment if:

- It would create an insufficient or wasteful consumption of energy on local and regional energy supplies or require significant additional capacity for the area or region;

- It would create a strain on peak- and base-period demands for electricity and other forms of energy; or,
- It does not comply with existing energy standards.

PROGRAM EFFECTS

Implementation of the Project would result in the consumption of energy in the form of electricity, natural gas, and fuel (gasoline and diesel), during both construction and operation of new buildings. The estimated total construction and operational energy consumption resulting from the Project is based on new building floor square footage and by land use type. As shown in Table III.P-1, the net new operational energy consumption resulting from the Project would be approximately 85,400 kilowatts of electricity (kWh) or 878 MMBtu and 361 million cubic feet (MMcf) of natural gas per year at project buildout (2025). As shown in Table III.P-2, the estimated net new construction energy consumption of the Project Area would be approximately 3.7 MMBtu by 2025.

New and remodeled buildings resulting from the Project would be regulated by the Energy Efficiency Standards of Title 24. Compliance with Title 24 would be enforced by the San Francisco DBI through the building permit review process before commitment of energy resource would occur. Compliance with Title 24 would ensure that new buildings resulting from implementation of the Project would not use fuel or energy in a wasteful manner. The additional energy consumption in terms of operational or construction demand would not, by itself, require significant additional capacity in the area that could have physical effects on the environment, nor would it result in cumulative impacts on energy consumption.

Although energy costs and environmental impacts of energy consumption may vary with increases in future demand and potential scenarios that may evolve to meet such demand, it is reasonable to expect that the availability of electricity, natural gas, and other fuels will be sufficient to meet energy demand over the next 10 to 20 years. As discussed above, development of the Project would not encourage activities that result in the use of large amounts of fuel or energy. As such, the Project would have a less-than-significant impact on any energy consumption.

TABLE III.P-1
ANNUAL OPERATIONAL ENERGY CONSUMPTION
AT PROJECT BUILDOUT (2025)

Land Use	Building Floor Area [gsf]	Electricity Consumption Factor [kWh/gsf-yr] ¹	Natural Gas Consumption Factors [cf/gsf-yr] ¹	Annual Energy Consumption	
				Electricity [1,000 kWh]	Natural Gas [MMcf]
Medical and Health Services	50,000	23.05	20	1,153	1
Production, Distribution, Repair	425,000	6.51	4.71	2,766	2
Management and Information Professional Services	220,000	48.03	22.72	10,567	5
Retail and Entertainment	1,591,850	36.60	10.74	58,260	171
Cultural/Institutional/Educational ²	115,000	31.71	113.04	3,647	13
Visitor Lodging	5,000	6.07	40	30	0.2
	[du]	[kWh/unit-yr] ³	[cf/unit-yr] ³		
Residential	3,700	2,432	4,568	9,000	169
TOTAL				85,423	361.2
			MMBtu =		878

Source: EIP Associates, 2004.

Notes:

gsf = gross square feet

kWh = kilowatt hour

cf = cubic feet

MMcf = million cubic feet

du = dwelling units

MMBtu = million British thermal units

1 cf natural gas = 1,050 Btu input

1 kWh electricity = 10,239 Btu input

¹ Based on unpublished commercial model data from California Energy Commission July 1995 forecast. Information provided by Richard Rohrer, Assistant Chief Forecaster, California Energy Commission, July 17, 1997.

² For police stations, fire stations, and schools, assumes 75 percent coverage of site.

³ San Francisco Planning Department, *Mission Bay FER*, 1990, Table XIV.H.5.

TABLE III.P-2
ESTIMATED TOTAL CONSTRUCTION ENERGY CONSUMPTION AT BUILDOUT

Land Use	Floor Area of New Construction [gsf]	Construction Energy Consumption Factor [Btu/gsf] ¹	Construction Energy Consumption [MMBtu]
Medical and Health Services	50,000	1,640,000	82,000
Production, Distribution, Repair	425,000	719,000	305,500
Management and Information Professional Services	220,000	940,000	206,800
Retail and Entertainment	1,591,850	1,540,000	2,451,800
Cultural/Institutional/Educational ²	115,000	5,677,000	652,826
Residential ³	8,600	650,000	5,590
TOTAL	2,410,450		3,704,516
		MMBtu =	3.7

Source: EIP Associates, 2004.

Notes:

gsf = gross square feet

Btu = British thermal units

MMBtu = million British thermal units

¹ Based on construction factors used in 1990 *Mission Bay FEIR*, pp. XIV.H.2 – XIV.H.4.

² For police stations, fire stations, and schools, assumes 75 percent coverage of site.

³ Includes residential and visitor lodging gsf.

IV. MITIGATION MEASURES

Each mitigation measure is identified below. Mitigation measures identified in this EIR would be required by decision makers as conditions of project approval unless they are demonstrated to be infeasible based on substantial evidence in the record.

A. PLANS AND POLICIES

There are no significant or potentially significant impacts with respect to plans and policies; therefore, no mitigation measures are required.

B. LAND USE AND ZONING

There are no significant or potentially significant impacts with respect to land use and zoning; therefore, no mitigation measures are required.

C. EMPLOYMENT, POPULATION, AND HOUSING

There are no significant or potentially significant impacts with respect to employment, population, and housing; therefore, no mitigation measures are required.

D. TRANSPORTATION AND CIRCULATION

Mitigation Measure 1: Third Street/Cesar Chavez Street

With the installation of the Third Street LRT, Third Street at Cesar Chavez Street will provide one left turn lane, one through lane, and one shared through-right lane at the northbound approach. To mitigate the project's impact at this intersection, one additional northbound left turn lane would need to be provided. This mitigation measure would result in operating conditions of LOS E (68.8 seconds of delay), with less delay experienced than in the no-project conditions.

Due to the Third Street LRT, space could not be taken from the center of Third Street. Parking will not be allowed in either direction on Third Street. To accommodate the additional space needed for a second left turn lane, Third Street would need to be widened to the east. Additional right-of-way acquisition would be necessary in the

northeast and southeast quadrants of the intersections to facilitate the widening of Third Street. This would require the demolition of two warehouse structures.

The Department of Parking and Traffic (DPT) evaluated this mitigation measure and identified it to be infeasible, because of the need to acquire right-of-way with existing structures. Thus, this impact is considered significant and unavoidable.

It should be noted that the *Third Street Light Rail Project FEIR* identified cumulative traffic impacts at the Third Street/Cesar Chavez intersection as significant and unavoidable. No mitigation measures were provided by the Third Street Light Rail Project.

Mitigation Measure 2: Third Street/Evans Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. The Third Street LRT design for this intersection provides Third Street with one through lane and one shared through-right lane in both the northbound and southbound directions at its intersection with Evans Avenue. There will be left turn lanes in both directions on Third Street. The eastbound approach on Evans Avenue will have one left turn lane, one through lane, and one shared through-right lane. The westbound approach on Evans Avenue will have one left turn lane, two through lanes, and one right turn lane.

A second left turn lane would be necessary on the westbound approach on Evans Avenue. Space for the additional left turn lane would be obtained by removing the on-street parking allowed on the roadway at this westbound approach. Two-hundred feet of parking (approximately 8 parking spaces) would be removed to accommodate a 200-foot-long right turn lane. Each of the traffic lanes on the westbound approach would be shifted to the north to accommodate the additional left turn lane.

The eastbound shared through-right lane would be converted into one through lane and a separate eastbound right turn lane would be added on Evans Avenue. The right turn lane would be a minimum of 100 feet long. The roadway centerline at the eastbound approach would be moved approximately 10 feet to the north. Space for the additional right turn lane would be obtained by removing the on-street parking located adjacent to the westbound receiving lanes at the eastbound approach.

These mitigation measures would require the acquisition of approximately 15 feet of right-of-way from the parcel on the north side of Evans Street between Third Street and Phelps Street (the northwest intersection quadrant). This additional space would allow for an adequate alignment of the westbound through movements crossing Third Street.

In addition, a second left turn lane would be necessary on the northbound approach on Third Street. This mitigation measure would require the acquisition of approximately 10 feet of right-of-way from the parcel on the east side of Third Street (northeast quadrant). This would result in moving the sidewalk 10 feet east on Third Street.

This mitigation measure would result in operating conditions of LOS F (61.9 seconds of delay), with less delay experienced than in the no-project conditions.

Acquiring right-of-way at this intersection would not be possible without displacing existing businesses and structures. The DPT evaluated this mitigation measure and identified it to be infeasible. Thus, this impact is considered significant and avoidable.

Mitigation Measure 3: Bayshore Boulevard/Paul Avenue

Changes to the signal phasing at this intersection would have to be made to mitigate the project's impact at this intersection. Currently, the left turn movements on northbound and southbound Bayshore Boulevard operate with permitted left turns. These movements would be converted to protected left turn movements. No changes in intersection geometry would be made. This mitigation measure would result in operating conditions of LOS D (41.6 seconds of delay), with less delay experienced than in the no-project conditions.

Mitigation Measure 4: Bayshore Boulevard/Silver Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Currently, the eastbound approach on Silver Avenue has a shared left-turn and through lane and shared through and right-turn lane. To mitigate the impact at this intersection, an exclusive eastbound right-turn lane would need to be added. The proposed eastbound approach would consist of a shared left-turn and through lane, through lane and an exclusive right turn lane. To provide the right-turn lane the existing US 101 overcrossing would need to be widened. This mitigation measure would result in operating conditions of LOS F (V/C ration of 1.71), with less delay experienced than in the 2025 Base Scenario.

However, the DPT evaluated this mitigation measure and identified it to be infeasible because of the widening of the overcrossing. Thus, this impact is considered significant and unavoidable.

Mitigation Measure 5: Bayshore Boulevard/Industrial Way/Alemany Boulevard

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Currently, the northbound approach on Bayshore Boulevard has one left turn lane, two through lanes, and one shared through-right lane. To mitigate the impact at this intersection, a second exclusive left turn lane would need to be added. The two receiving lanes on the west leg would accommodate the two northbound left turn lanes. In order to provide the second exclusive left-turn lane, the buildings and residences in the southeast quadrant of this intersection would have to be demolished. This mitigation measure would result in operating conditions of LOS F (77.6 seconds of delay), with less delay experienced than in the no-project conditions.

The DPT evaluated this mitigation measure and identified it as infeasible because right-of-way would need to be acquired in the southeast and southwest quadrants of the this

intersection to mitigate this impact, which would require the demolition of existing businesses. Thus, this impact is considered significant and unavoidable.

Mitigation Measure 6: Cesar Chavez Street/Evans Avenue

Physical changes to the intersection's geometry would have to be made to mitigate the project's impact at this intersection. Evans Avenue provides one left-turn lane and one shared left-right lane on the northbound approach at its intersection with Cesar Chavez Street.

The *FEIS* for the *Disposal and Reuse of Hunters Point Shipyard* identified a project impact at the Cesar Chavez Street/Evans Avenue intersection and proposed the re-striping of the northbound approach to consist of two left turn lanes and a right turn lane. Structural modifications to the viaduct would be necessary to provide a proper curb return for right turn movement.

These changes would also mitigate the Project's impact. This mitigation measure would result in operating conditions of LOS F (V/C ratio of 1.5), with less delay experienced than in the no-project conditions.

Mitigation Measure 6A: US 101 South of I-280 (Northbound Direction)

Northbound US 101 south of I-280 would need to be widened to mitigate this impact. However, acquiring additional right-of-way in this section without the demolition of existing residences and businesses is not feasible. This impact is considered significant and unavoidable.

E. VISUAL QUALITY

MITIGATION MEASURES

Mitigation Measure 7: The Bayview Hunters Point Design Guidelines would prevent glare in new development by requiring:

- Lighting would be used to illuminate businesses and improve sidewalk visibility and increase building safety.
- Indirect lighting onto signs and the building façade would be encouraged. This would supplement the street lighting for pedestrians and would identify the building and its business occupants.
- Auxiliary security lighting (i.e., floodlights) would be shielded from public view.

F. SOLAR ACCESS AND SHADING

There are no significant or potentially significant impacts with respect to solar access and shading; therefore, no mitigation measures are required.

G. WIND

There are no significant or potentially significant impacts with respect to solar access and shading; therefore, no mitigation measures are required.

H. AIR QUALITY

Mitigation Measure 8: The following are construction mitigation measures adapted from the *BAAQMD CEQA Guidelines*:

The project sponsor shall prepare and implement a dust control plan. The plan shall be submitted to the City of San Francisco Public Works Department, which would be responsible for field verification of the plan during construction. The plan shall comply with the City grading ordinance. To reduce particulate matter emissions during construction and demolition phases, the contractor shall include in the dust control plan dust control strategies recommended by the BAAQMD. The project sponsor shall include the following measures, as appropriate, in the plans and specifications for construction contracts, and in the dust control plan.

Basic Control Measures: to be implemented on all construction sites.

- Cover all trucks hauling construction and demolition debris from the site;
- Water all exposed or disturbed soil surfaces at least twice daily;
- Use watering to control dust generation during demolition of structures or break-up of pavement;
- Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved parking areas and staging areas;
- Sweep daily (with water sweepers) all paved parking areas and staging areas;
- Provide daily clean-up of mud and dirt carried onto paved streets from the site.

Enhanced Control Measures: to be implemented at construction sites greater than four acres in area.

- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles of soil, sand, etc.;
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible.

The following are mitigation measures that would reduce, but not eliminate, the possibility that the risks from TAC emissions from individual facilities within the Project Area could result in risks above BAAQMD significance thresholds for projects:

Mitigation Measure 9: Prior to issuing a certificate of occupancy for a facility containing potential TAC sources, obtain written verification from BAAQMD either that the facility has been issued a permit from BAAQMD, if required by law, or that permit requirements do not apply to the facility.

Mitigation Measure 10: Prohibit dry cleaning facilities that conduct on-site dry cleaning operations from residential areas within the Project Area. For any dry cleaning operations within the Project Area, require vapor barriers in their design and construction so as to reduce exposure to TACs handled at the facility.

Mitigation Measure 11: Require preschool and child care centers to notify BAAQMD and the San Francisco Department of Public Health regarding the locations of their operations, and require these centers to consult with these agencies regarding existing and possible future stationary and mobile sources of TACs. The purpose of these consultations is to obtain information so that preschool and child care centers can be located to minimize potential impacts from TAC emission sources.

I. NOISE

There are no significant or potentially significant impacts with respect to noise; therefore, no mitigation measures are required.

J. CULTURAL RESOURCES

Mitigation Measure 12: Prior to any ground-disturbing activities within the Project Area at a depth of three feet below the existing grade, the archeology testing mitigation measures would be implemented.

Based on a reasonable presumption that archeological resources may be present within the Project Area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant

having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the Project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the Project, at the discretion of the project sponsor either:

- A) The Project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitors shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/ excavation/ pile driving/ construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the Findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed

data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 13: Based on the reasonable potential that archeological resources may be present within the Project Area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of *construction* can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological monitoring program (AMP). The archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the project archeologist shall determine what project activities shall be archeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archaeological monitors) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/ excavation/ pile driving/ construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, present the findings of this assessment to the ERO.

If the ERO in consultation with the archeological consultant determines that a significant archeological resource is present and that the resource could be adversely affected by the Project, at the discretion of the project sponsor either:

- A) The Project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

If an archeological data recovery program is required by the ERO, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The project archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP. The archeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to

possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the Project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis,* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for die curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical of any discovered archeological resource and describes the archeological and

historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 14: The following mitigation measure is required to avoid any potential adverse effect from the Project on accidentally discovered buried or submerged historical resources as defined in *CEQA Guidelines* Section 15064.5{a}(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractors), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the project sponsor.

Measures might include: preservation in situ of the archeological resource; an archaeological monitoring program; or an archeological testing program. If an archaeological monitoring program or archeological testing program is required, it shall be consistent with the Major Environmental Analysis (MEA) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. Copies of the FARR shall be sent to the Agency. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure 15:

- A. Prior to any physical removal of a historic resource, the project sponsor would prepare, or cause to be prepared, documentation of the historic resource in a Historic Resource Documentation Report. Such documentation would follow an appropriate level of data collection, preparation of drawings, and photography based on the historic significance of the historic resource. The Agency in consultation with the Landmarks Preservation Advisory Board (LPAB) would select the level of documentation from the four levels (Documentation Level I, II, III, or IV) described in the Secretary of the Interior's Standards for Architectural and Engineering Documentation and Guidelines for Architectural and Engineering Documentation.

The documentation would be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*, published in the Federal Register, June 20, 1997 (Volume 62, Number 119). In addition to these qualifications, the Historical Architect would have demonstrated experience in not less than three projects meeting the Secretary of the Interior's Standards for Architectural and Engineering Documentation and Guidelines for Architectural and Engineering Documentation. One project must have been approved and accepted by the Historic

American Building Survey/Historic American Engineering Record (HABS/HAER), National Park Service.

The Historic Resource Documentation Report would be sent to the following repositories: History Room, San Francisco Public Library, and San Francisco Architectural Heritage.

- B. Prior to undertaking a rehabilitation project of a Historic Resource, the project sponsor would prepare, or cause to be prepared, a historic structure(s) report (HSR) for the historic resource. The HSR would set forth the history of the resource, describe and document its existing condition, make recommendations for repair, rehabilitation, replacement, reconstruction, and other treatments based on the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Secretary of the Interior's Standards). The HSR would act as a guide to the rehabilitation plan for the building(s).

The HSR would be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*, published in the Federal Register, June 20, 1997 (Volume 62, Number 119).

The project sponsor would retain the services of a Historical Architect as a member of the design team for the proposed rehabilitation project. The Historical Architect could be the same Historical Architect who prepared the HSR, without encountering a conflict of interest.

If not a member of the project team, the Historical Architect would review the rehabilitation plans prepared by the project architect for compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, and Section 1111.6. Standards and Requirements for Review of Applications for Alterations (Article 11).

The Historical Architect would make a report to the Landmarks Preservation Advisory Board concerning project compliance with the Secretary of the Interior's Standards. The LPAB would approve, approve with conditions, or disapprove the project design based on its evaluation using the Secretary of the Interior's Standards. The LPAB's decision would be final and not appealable.

- C. The project sponsor shall prepare a plan for protection of adjacent historic resources. Such a plan would include the following:
- Storage of materials a sufficient distance away from the historic resource.
 - Instructions to equipment operators making them aware of the historic resource and using caution when operating near the resource.

- Monitoring construction activities to assure implementation of the plan.
- The project sponsor shall consult with the San Francisco Landmarks Preservation Advisory Board (LPAB) to evaluate the Project's architectural compatibility with adjacent historic resources(s), as new development may differ in scale, design or materials than the existing older structures, and could change the context of historic resources.

Mitigation Measure 16: Prior to undertaking a rehabilitation project as proposed under the Façade Renewal Program, the City or Agency shall prepare a historic structure(s) report (HSR) for the historic resource(s) to be affected. The HSR would set forth the history of the resource, describe and document its existing condition, make recommendations for repair, rehabilitation, replacement, reconstruction, and other treatments based on the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Secretary of the Interior's Standards). The HSR would act as a guide to the rehabilitation plan for the building(s).

The HSR shall be prepared by a licensed architect who meets the qualifications for Historical Architect as set forth in the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*. The Historical Architect would make a report to LAPB concerning project compliance with the Secretary of the Interior's Standards. The LPAB would approve, approve with conditions, or disapprove the project design based on its evaluation using the Secretary of the Interior's Standards.

K. HAZARDS AND HAZARDOUS MATERIALS

There are no significant or potentially significant impacts with respect to hazards and hazardous materials; therefore, no mitigation measures are required.

L. GEOLOGY AND SOILS

There are no significant or potentially significant impacts with respect to geology and soils; therefore, no mitigation measures are required.

M. HYDROLOGY AND WATER QUALITY

There are no significant or potentially significant impacts with respect to hydrology and water quality; therefore, no mitigation is required.

N. BIOTIC RESOURCES

Mitigation Measure 17: To avoid and minimize impacts to sensitive wetland habitats, the Project Sponsor shall complete a wetland delineation and habitat mapping survey for all shoreline areas proposed for construction as a result of the Project. This survey shall be submitted to the Agency and Planning Department (or City). These efforts would identify all sensitive habitats within a specific project area and allow for a quantitative evaluation of project impacts. Any activity that involves dredging or fill of a wetland area would be within the jurisdiction of several regulatory agencies and require permits and mitigation plans to satisfy these agencies (see Regulatory Framework discussion).

Additionally, the Project Sponsor shall complete the following items for each specific project:

- Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to ensure that there would be no impacts from stormwater runoff on fish or other aquatic species occurring in San Francisco Bay. The SWPPP shall be submitted to the Agency and City.
- Plan construction activities to avoid working directly in sensitive wetlands or mud flats when at all possible. For areas where avoidance is not possible, a permit(s), complete restoration, and cleanup of disrupted areas will be required.

Mitigation Measure 18: Specific projects shall avoid damage to, or removal of, street trees to the extent possible. Removal of street trees shall only occur after obtaining the appropriate permit from the DPW. Street trees removed or damaged by construction activities shall be replaced with plantings of the same tree species, or tree species designated or approved by the DPW.

Those trees to be retained shall not be damaged during construction. This shall be achieved by installing temporary fencing at the tree drip line during construction. There shall be no disturbance from construction activity, storage of materials, or worker parking within the drip lines of trees. Existing trees to be retained shall receive summer watering during construction. Continued summer irrigation of these trees shall be incorporated into the landscaping design for any individual project within the Project Area.

Mitigation Measure 19: Although this impact is considered less than significant, the following improvement measure is provided to facilitate compliance with state and federal laws relating to the protection of nesting birds.

The removal of trees, shrubs, or weedy vegetation should avoid the February 1 through August 31 bird nesting period to the extent possible. If no vegetation or tree removal is proposed during the nesting period, no surveys are required. If it is not feasible to avoid the nesting period, a survey for nesting birds should be conducted by a qualified wildlife biologist no earlier than 14 days prior to the removal of trees, shrubs, grassland vegetation, buildings, or other construction activity. Survey results shall be

valid for 21 days following the survey. The area surveyed should include all construction areas as well as areas within 150 feet outside the boundaries of the areas to be cleared or as otherwise determined by the biologist.

In the event that an active nest is discovered in the areas to be cleared, or in other habitats within 150 feet of construction boundaries, clearing and construction should be postponed for at least two weeks or until a wildlife biologist has determined that the young have fledged (left the nest), the nest is vacated, and there is no evidence of second nesting attempts.

O. PUBLIC SERVICES AND UTILITIES

There are no significant or potentially significant impacts with respect to public services and utilities; therefore, no mitigation measures are required.

P. ENERGY

There are no significant or potentially significant impacts with respect to energy; therefore, no mitigation measures are required.

V. OTHER CEQA CONSIDERATIONS

A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

In accordance with Section 21100 (b)(2)(A) of CEQA, and Section 15126.2(b) of the State CEQA Guidelines, this section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by implementing mitigation measures included as part of the project or by other mitigation measures that could be implemented, identified in Section IV, Mitigation Measures. This section is subject to final determination by the Agency Commission or the San Francisco Planning Commission as part of the certification process for the EIR. If necessary, this section will be revised in the Final EIR to reflect the findings of the Agency Commission or Planning Commission.

As discussed in Section III, Environmental Setting and Impacts, and Section IV, Mitigation Measures, implementation of the Project would result in the following unavoidable significant adverse effects:

- the new Stadium Development Retail/Entertainment Center would block some shoreline and bay views from residences at the St. Francis Bay Condominiums on the southern side of Bayview Hill;
- the new Stadium Development Retail/Entertainment Center would also change the visual character of the Candlestick Point State Recreation Area, as a portion of the park would be used for parking;

Intersection level of service impacts during the weekend PM peak hour at:

- Third Street/Cesar Chavez Street;
- Third Street/Evans Avenue;
- Bayshore Boulevard/Silver Avenue; and
- Bayshore Boulevard/Industrial Way/Alemany Boulevard.

Freeway segment level of service impacts during the weekend PM peak hour at:

- Northbound US 101 south of I-280

Cumulative effects are by their nature more speculative, because their analysis depends on a prediction of future environmental changes beyond the development assumed with implementation of the Project. However, the proposed Bayview Hunters Point Redevelopment Projects and Rezoning would not result in significant unavoidable cumulative impacts.

B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Development due to the Project would require an irreversible commitment of material or natural resources for building construction, such as wood, refined metal, petroleum, sand and gravel, stone, concrete, asphalt, masonry, and water.

Implementation of the Project would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and automobiles, and during demolition, construction, and ongoing use of the site. Because future development associated with the Project would be required to comply with California Code of Regulations Title 24, future development would not be expected to use energy in a wasteful, inefficient or unnecessary manner.

Implementation of the Project would also irreversibly use water and solid waste landfill resources. However, development associated with implementation of the Project would not be expected to involve a large commitment of those resources relative to supply, nor would they be expected to consume any of those resources wastefully, inefficiently or unnecessarily.

Additional vehicle trips due to Project implementation would contribute to future cumulative air quality impacts from increases in nitrogen oxides and particulate matter.

C. GROWTH INDUCING IMPACTS

The Project is intended to support growth by facilitating the development of new housing as well as new retail, office, medical, PDR, and cultural building space. The effectiveness of this effort in terms of nonresidential building space and employment cannot be predicted, as the Project Area will compete with the remainder of San Francisco as well as other Bay Area

locations for much of the private sector growth that is sought by the Project. If the Project reaches its full potential, it will increase the number of new jobs in the Study Area between 2000 and 2025 by nearly 60 percent over the Base Case. Total employment in the Study Area would be about eight percent higher with the Project than with the Base Case.

The Project contemplates the development of more housing units during its timeframe than are anticipated in the Base Case projection; however, this may not be a sufficient number to house the population growth expected in the area.

On a larger scale, the Project would increase the overall amount of growth in San Francisco to then extent that it alters perceptions of the desirability of the Study Area as a location for employment and housing. Except within previously adopted redevelopment project areas, such as IBIP, the area has not attracted large-scale private investment in the recent past. The Project ability to attract new investment could derive from:

- Retail activity at the proposed mall component of in the Stadium Development Retail/Entertainment Center. Some successful centers of the scale proposed for this area have attracted overnight visitors, which would create a demand for lodging and restaurants near the Stadium Development Retail/Entertainment Center.
- Medical offices in the Health Center Activity Node. If the proposed building development creates a critical mass, additional medical offices, lab facilities, and suppliers could seek to locate in the area.
- Residential development throughout the Study Area. The addition of 6,146 housing units would increase the Study Area's population by an estimated 20,100 residents. These new residents would strengthen market demand for local-serving retail and service businesses.
- Cultural uses in the Town Center Activity Node. Depending on the nature of the uses, this development could attract patrons who would support nearby restaurants, cafes, and convenience retail outlets.

VI. ALTERNATIVES

A. LEGISLATIVE FRAMEWORK

The primary intent of the alternatives evaluation, as stated in Section 15126.6(a) of the CEQA Guidelines, is to “describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Further, the CEQA Guidelines state that “the discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly” (CEQA Guidelines, Section 15126.6(b)).

CEQA Guidelines Section 15126.6 requires an analysis of a reasonable range of alternatives that would reduce or eliminate significant impacts of a project, and also requires analysis of the No Project Alternative. The purpose of describing and analyzing the No Project Alternative is to allow decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project. CEQA Guidelines Section 15126.6 (e)(3)(A) provides that “when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the ‘no project’ alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.” The No Project Alternative in this chapter therefore discusses future conditions in the Project Area if current planning controls continued in the future, and no other Redevelopment actions or incentives were implemented. This No Project Alternative, however, does not assume that no further development would occur in the Project Area.

B. ANALYTIC APPROACH

This chapter evaluates alternatives to the Project and identifies impacts relative to those of the Project. Mitigation measures that have been identified for Project impacts would apply to impacts of the alternatives. Implementation of the Project would generate environmental impacts from physical land use changes, additional jobs, and additional residents in the Project Area.

In formulating the project alternatives, this report uses the CEQA standard of analyzing alternatives that would lessen potentially significant project effects and whose effects can be reasonably ascertained. Implementation of the Project would result in significant and unavoidable impacts associated with urban design and visual quality, as well as traffic. Specifically, the Stadium Development Retail/Entertainment Center would have the greatest visual impact on short-range views within the Candlestick Point Activity Node. The Stadium Development Retail/Entertainment Center would be closer to the adjacent neighborhood to the northwest, and would obstruct scenic views of the bay looking southeast along Gilman Street. The proposed Stadium Development Retail/Entertainment Center would block some shoreline and bay views from residences at the St. Francis Bay Condominiums on the southern side of Bayview Hill, and would also change the visual character of the Candlestick Point State Recreation Area, as a portion of the recreation area would be used for parking. As no mitigation measures have been identified to reduce the impacts to scenic views of the bay from the Stadium Development Retail/Entertainment Center to a less-than-significant level, these are considered significant, unavoidable visual impacts to scenic views of the Bay.

In the weekday PM peak hour the additional trips generated by the Project would deteriorate levels of service to unacceptable levels at two study intersections, and would contribute to substantial delay at four intersections:

- Third Street/Cesar Chavez Street (increase in delay);
- Third Street/Evans Avenue (from LOS E to LOS F);
- Bayshore Boulevard/Paul Avenue (from LOS D to LOS F);
- Bayshore Boulevard/Silver Avenue (increase in delay);

- Bayshore Boulevard/Industrial Way/Alemany Boulevard (increase in delay); and
- Cesar Chavez Street/Evans Avenue (increase in delay).

The intersections of Third Street/Cesar Chavez Street, Third Street/Evans Avenue, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Street/Alemany Boulevard, Evans Avenue/Cesar Chavez Street would be considered to have a significant unavoidable impact since no mitigation is available to improve LOS to an acceptable level.

This section evaluates two alternatives to the Project. The No Project Alternative assumes that no redevelopment plan or rezoning would be implemented in the Project Area. However, development would still occur under current zoning regulations; as few buildings are built to the current height limit, many structures could be renovated, and sites could be rebuilt as mixed-use residential units. The Zoning Option B alternative, as proposed by the Eastern Neighborhoods Rezoning community planning process, assumes that a redevelopment plan would be implemented, but under a different zoning scheme: Zoning Option B. This alternative would allow for reduced housing development compared to the proposed full build-out analyzed for the Project. Table VI-1 summarizes employment growth and Table VI-2 summarizes housing growth under Option B, and compares it to the existing conditions and the Project.

C. NO PROJECT ALTERNATIVE

DESCRIPTION

The No Project Alternative, or Base Case Scenario, assumes that the Agency would not adopt and implement the Project. Development that would take place in the Project Area would proceed under existing zoning regulations. Additional business and housing growth would occur within the Project Area; however, it would be created without the comprehensive goals and objectives that stimulate land development, rezoning, and other improvements as provided by the Project. Thus, support and facilitation of redevelopment activities would have limited growth potential under the No Project Alternative. If existing zoning regulations continued

TABLE VI-1
NEW EMPLOYMENT, BY INDUSTRY, 2000-2025:
OPTION B ALTERNATIVE, BASE CASE, AND REDEVELOPMENT PLAN

	Number of Jobs			Alternative as Percent of:	
	Option B Alternative	Base Case	Project	Base Case	Project
Cultural/Institutional/ Educational (CIE)	339	367	444	92%	76%
Medical and Health Services (MED)	15	15	128	100%	12%
Mgmt and Information Prof. Svcs (MIPS)	2,344	1,338	2,240	175%	105%
Production, Distribution, Repair (PDR)	1,946	3,190	1,827	61%	107%
Retail and Entertainment (RET)	370	398	3,725	93%	10%
Visitor Lodging (VISIT)	0	0	11	n.a.	0%
TOTAL	5,011	5,308	8,375	94%	60%

Source: Mundie & Associates, 2004.

TABLE VI-2
HOUSING GROWTH WITH ALTERNATIVE
AS PERCENT OF GROWTH WITH BASE CASE AND
PROJECT, 2000-2025

Location	Number of Units*			Increase with Alternative as Percent of Increase with	
	With Option B Alternative*	With Base Case	With Project	Base Case	Project
Units	2,580	1,718	6,146	150%	42%

Source: San Francisco County Transportation Authority; Mundie & Associates., 2004.

Notes:

- * All housing unit numbers are based on the transportation model estimates of households (the model assumed no vacancies). Note that the Planning Department's estimate for Option B is that capacity will be created for 2,300 housing units, and that of those, 1,100 units will be added.

under the Base Case scenario, there would be approximately 5,300 new jobs and approximately 460 housing units (37 percent and 88 percent fewer than the Project).

IMPACTS

Land Use

Existing zoning regulations would continue to be implemented with the No Project Alternative. As discussed above, additional business and housing growth would continue to occur, although not to the extent that the Project would accommodate. Continuation of the Base Case scenario, or the No Project Alternative would further increase the long-standing conflicts between industrial and residential uses. In addition, the No Project Alternative would not provide incentives for economic revitalization or increasing the housing supply. Further, the quality of future development would not necessarily be improved, because the Heavy and Light Industrial zoning (M-1 and M-2) would remain throughout the Project Area interspersed with residential use. Therefore, impacts would be greater than the Project, although it would remain less than significant.

Employment, Housing, and Population

The No Project Alternative would result in about 63 percent of the employment growth that would be expected under the Project; the No Project Alternative would account for approximately 5,300 new jobs compared to 8,375 new jobs with the Project (see Table VI-1). In addition, the housing growth anticipated with this alternative would be substantially lower than that with the Project; only 1,718 new residential units would be accommodated, as compared to 6,146 units with the Project (see Table VI-2). As with the Project, the estimated need for housing would exceed the created capacity and would further decrease the jobs/housing balance within the City. However, this imbalance would occur to a greater degree with the No Project Alternative. Population growth would increase by approximately 2,815 residents in the Study Area.¹ This increase would be substantially less than the increase of 20,896 residents anticipated with the Project and would account for six percent of the base-

case Citywide population growth (42,241 residents) anticipated in San Francisco during the 25-year period (see Table III.C-5).

The existing zoning regulations in the No Project Alternative would result in fewer residential units with nearly as much employment growth in the Project Area.

Transportation and Circulation

Future conditions with the 2025 Base Case under the No Project Alternative is a forecast of growth in the City of San Francisco in the Year 2025 consistent with ABAG projections. The No Project Alternative (2025 Base Case) would result in LOS E or F at five intersections, compared to six intersections with the Project. The No Project Alternative would result in LOS D at Bayshore Boulevard/Paul Avenue, compared to LOS F with the Project. The No Project Alternative would result in a significant unavoidable impact at the intersections of Third Street/Cesar Chavez Street, Third Street/Evans Avenue, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Way/Alemany Boulevard, and Evans Avenue/Cesar Chavez Street.

With the No Project Alternative, all freeway segments and freeway ramps with the exception of northbound US 101 south of I-280, would operate at LOS D or better. This would be a significant unavoidable adverse impact associated with the No Project Alternative, as with the Project.

Similar to the Project, development of the No Project Alternative would not result in potentially significant impacts related to transit, pedestrian conditions, bicycle conditions, parking conditions, loading, or goods movement.

Urban Design and Visual Quality

With the No Project Alternative, existing zoning controls would remain in place, and development would generally be comparable with the overall height and bulk of existing buildings in the Project Area. As with the Project, development under this alternative would not create substantial change in views or lighting levels. However, potential visual effects

could arise from the continued increase in conflicts between industrial and residential uses. Thus, impacts to visual effects would be greater with the No Project Alternative than with the Project, as no remedies such as buffer zones or transitional uses exist between the existing uses in the current zoning regulations. However, because this condition currently exists, the impact would be less than significant.

With respect to the Candlestick Point Activity Node, the Stadium Development Retail/Entertainment Center could be developed under the No Project Alternative. The introduction of the Stadium Development Retail/Entertainment Center would change the visual character of the Candlestick Point State Recreation Area because a portion of the existing open space would be used for parking. In addition, the Stadium Development Retail/Entertainment Center would create an unavoidable increase in overall outdoor lighting levels. Similar to the Project, these two effects would be considered significant, unavoidable visual impacts to scenic views of the Bay.

Solar Access and Shading

Development under the No Project Alternative would be subject to existing zoning controls. Similar to the Project, development with the No Project Alternative would be subject to requirements of *Planning Code* Section 295, including shadow studies to determine potential effects on public open space under Recreation and Park Department jurisdiction. Therefore, development that could occur under existing regulations would also avoid significant adverse shadow effects on open space in the Project Area and vicinity, as with the Project.

Wind

As with the Project, the No Project Alternative would permit buildings over a height of 100 feet. These tall buildings would adversely affect the street level wind environment. Although Section 148 of the Planning Code does not apply in the Project Area, as it specifies comfort and hazard criteria for pedestrian level wind in certain zoning districts, project specific wind analyses would be required for any proposed new buildings greater than 100 feet. Thus, as with the Project, no significant wind impacts would be expected to occur with the No Project Alternative.

Air Quality

The No Project Alternative would continue development under existing zoning controls, and would result in somewhat fewer jobs and substantially fewer housing units. Construction projects would be required to implement BAAQMD emission reduction methods, as with the Project. The No Project Alternative would result in a potentially significant impact related to TAC emissions. It is likely that this impact would be of greater severity without the Project as proposed buffer zones to separate industrial uses from other uses would not be created. As with the Project, no inconsistency with the 2000 Clean Air Plan and San Francisco *General Plan* would occur as growth would be within existing population growth assumptions, and no localized air quality effects would be expected.

Noise

The No Project Alternative would continue development under existing zoning controls, and would result in somewhat fewer jobs and substantially fewer housing units. The No Project Alternative would result in projected increases in noise levels at the most affected intersections of 2 dBA or less; as with the Project, this would not be a significant adverse impact. The less-than-significant impacts related to construction noise, stationary source noise, location of sensitive receptors (existing and proposed), and cumulative traffic noise of the Project would be similar or less than the level identified for the Project with implementation of the No Project Alternative.

Cultural Resources

Generally, impacts on architectural and historic resources with the No Project Alternative would be similar to those with the Project, as the type of uses allowed would not alter the potential for damage to cultural resources. Development could still occur within each activity node, and ground-disturbing activities could damage or destroy cultural artifacts potentially eligible for inclusion in the California Register of Historic Resources. In addition, activities on site with structures in the Project Area assigned a status code of “3,” “4,” or “5” that would require demolition, relocation, or substantial alterations to the structure or its immediate

surrounding, could have a significant impact on historical resources. However, the No Project Alternative would be expected to result in less new development; with about 460 new residential units, compared to about 3,700 units with the Project. Thus, the potential for ground-disturbing activities or modification/demolition of buildings would be reduced. Individual projects that would otherwise occur without the Project would continue to pose potential adverse impacts on cultural resources in the Project Area. As with the Project, adverse impacts on cultural or historical resources would remain potentially significant.

Hazards and Hazardous Materials

As with the Project, compliance with existing controls and regulations would ensure that impacts related to hazards and hazardous materials would be less than significant. Some future development that would be accommodated in the Project Area could involve the use, handling, and storage of hazardous materials or involve the generation of hazardous wastes as part of normal business operations due the industrial nature of the existing zoning regulations. Compliance with hazardous materials and hazardous waste regulations would minimize the risk for accidental releases and would ensure safe handling of hazardous materials and wastes at permitted facilities.

Continuation of the current zoning controls could reduce the displacement or subsequent closure of industrial land uses and would not promote the introduction of new businesses. Thus, because of the established regulatory framework for site assessment and remediation, impacts related to exposure to hazardous materials due to land use changes would be greater than with the Project but would remain less than significant.

As with the Project, potential exposure to hazardous building materials from existing structures would be abated in accordance with applicable federal, state, and local laws or regulations prior to demolition or renovation. In addition, compliance with the *San Francisco Building Code* and *Fire Code* would ensure that potential hazards related to development activities (including those associated with hillside development, hydrant water pressure, and emergency access) would be minimized during the permit review process and that development projects would not interfere with an existing emergency evacuation plan. Thus,

impacts would remain less-than-significant under implementation of the No Project Alternative.

Geology and Soils

With the No Project Alternative, impacts associated with seismic and soil hazards would be similar to those with the Project, including impacts to ground shaking, liquefaction, erosion, damage from settlement or instability of subsurface materials, asbestos, and corrosive soils. As is currently required, construction projects would include site-specific geotechnical studies, which would assess the nature and severity of the geologic hazards on the site and recommend project design and construction features that would reduce the hazards. In addition, development would be required to comply with existing regulations such as the Uniform Building Code and OSHA regulations, which provide standards designed to prevent or minimize potential damage. The decrease in total expected development with this alternative would reduce the area and population exposed to these impacts, but the net effect for development that occurs in compliance with these regulations would avoid significant adverse effects from geologic hazards.

Because of the high ratio of older buildings in the Project Area and the high probability of major earthquakes on nearby active faults, the No Project Alternative would not improve the overall seismic performance of the Project Area to the same extent as with the Project. This would be a less-than-significant effect of the No Project Alternative.

Hydrology and Water Quality

The No Project Alternative would continue development under existing zoning controls, and would result in somewhat fewer jobs and substantially fewer housing units. Development under the No Project Alternative would be less than under the Project, and water quality conditions would likely be similar or worse under the No Project Alternative because existing development would not necessarily be subject to identified mitigation measures as quickly as they would be under the Project.

Biotic Resources

The Project Area is almost entirely built out and supports no known sensitive species. For this reason, the No Project Alternative would not have significant effects on sensitive species, wildlife movement, or species diversity.

Impacts associated with the potential loss of sensitive habitats or species that use these habitats would be similar to conditions with the Project. Construction activities within or near shoreline portions of the Project Area could directly impact wetlands, mud flats, or salt marsh habitats in a variety of ways, including placement of fill, structures, or alteration of habitat, which would be considered a potentially significant impact.

Public Services and Utilities

The No Project Alternative would have less overall development, with substantially fewer residential units than under the Project. Thus, it is anticipated that the No Project Alternative would generate proportionally less future demand for police, fire, schools, community facilities, and parks in the Project Area, and impacts would remain less-than-significant.

In addition, the No Project Alternative would result in proportionally less future demand for water supply, wastewater treatment, and solid waste disposal, and impacts would remain less than significant.

Energy

The No Project Alternative would allow significantly less overall development, with nearly 88 percent fewer residential units than under the Project. Development allowed under this alternative would not encourage activities that result in the use of large amounts of fuel or energy. Thus, it is anticipated that development would generate proportionally less demand than would the Project, and impacts on energy consumption would remain less-than-significant.

D. ZONING OPTION B ALTERNATIVE

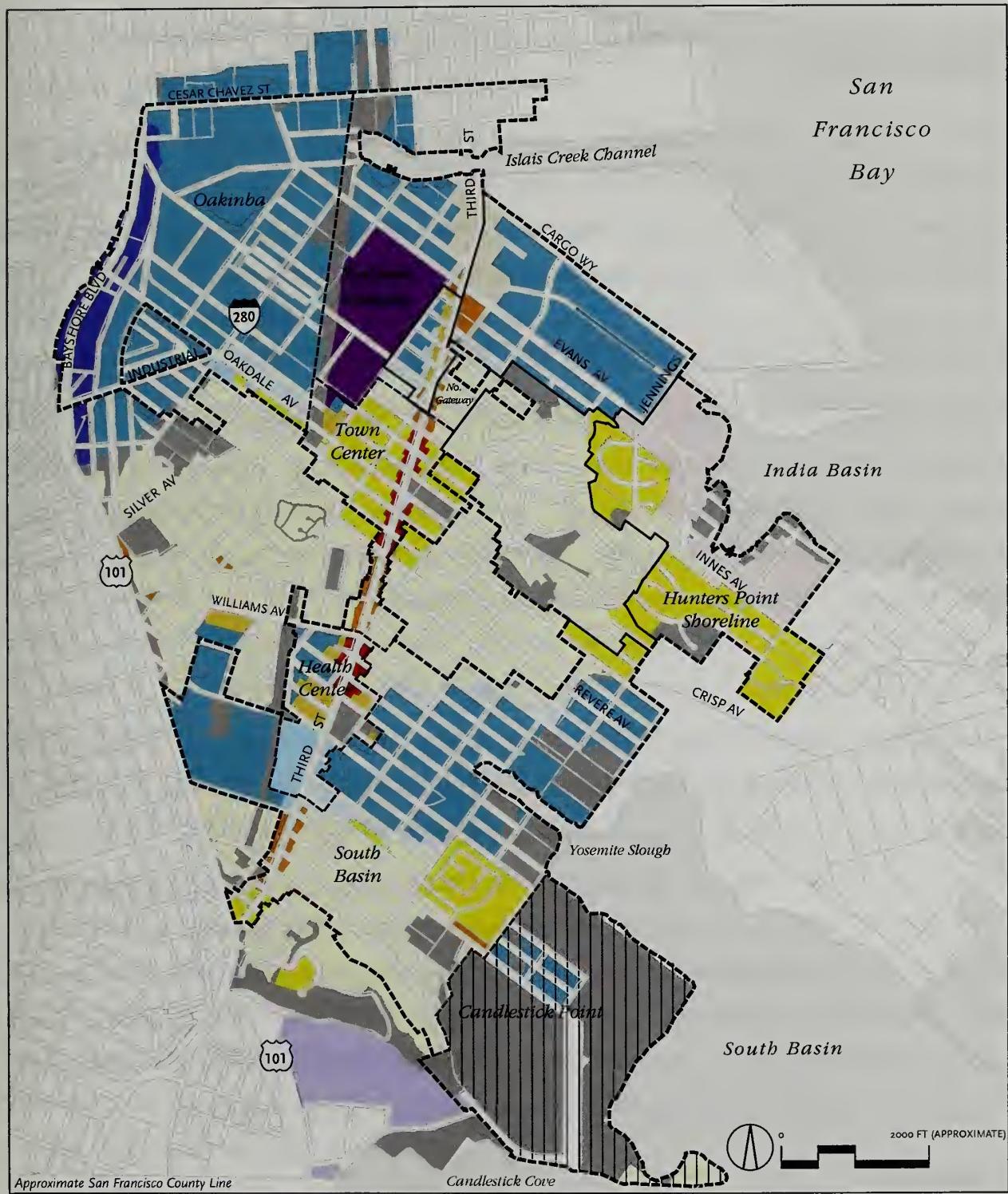
DESCRIPTION

The Zoning Option B Alternative (Alternative B) is considered a “moderate housing option” scenario for the Project Area (compared to a “high housing option” scenario represented by the Project). Figure VI-1 illustrates zoning designations with Zoning Option B. With Alternative B, Proposition F would still apply. This ballot initiative established the Candlestick Point Special Use District for the construction of the Stadium Development Retail/Entertainment Center.

Alternative B would be expected to result in about 60 percent of the employment growth with the Project and Alternative B would redistribute new employment among different business sectors. Alternative B would result in an increase of approximately 5,011 new jobs compared to an increase of approximately 8,375 new jobs with the Project. With Alternative B, however, the number of new MIPS and PDR jobs would be greater than with the Project, while the gains in all other sectors would be smaller. In particular, the number of new retail jobs with Alternative B would total fewer than 370, compared to 3,725 with the Project (both alternatives include the Stadium Development Retail/Entertainment Center).

Alternative B would be expected to result in 2,580 new housing units, fewer than the 6,146 units expected with the Project (about 42 percent of units).

Alternative B would focus new development in three activity nodes along Third Street. Alternative B would increase height limits and revise density limits and parking requirements. Ultimately, these changes would intensify the existing neighborhood commercial activities in the Town Center Activity Node, as well as allow somewhat larger mixed-use projects in the vicinity of the Health Center Activity Node. The Northern Gateway Activity Node could see the development of an industrial/commercial/residential area that accommodates both Light PDR activities and neighborhood-serving retail. Other activity nodes would essentially include the same controls as with the Project. Specific zoning regulations for each activity node are further described below.



Bayview Hunters Point Redevelopment Plan EIR

FIGURE VI-1 PROPOSED ZONING DESIGNATIONS FOR REZONING: OPTION B

Northern Gateway

In the Northern Gateway Activity Node, existing Heavy Industrial would become Maritime/Heavy Industrial and some Heavy Industrial along Third Street would become Residential/PDR. Compared to the Project, Alternative B designates Residential PDR instead of moderate-scale Neighborhood Commercial on the west side of Third Street.

Bayview Industrial Triangle and India Basin Industrial Park areas

In BIT and IBIP areas, Heavy Industrial districts and Light Industrial districts along Third Street would become Residential/Commercial and Residential/PDR. Compared to the Project, along Third Street, Residential/PDR would become Residential/Commercial, while Residential/Commercial would become Neighborhood Commercial Transit. Thus, compared to the Project, this alternative offers less diversity of uses.

Town Center

In the Town Center Activity Node, existing low-density residential uses would become medium density, and existing Neighborhood Commercial would remain. With Alternative B, some intensity of industrial development would occur. As with the Project, the area along Third Street would remain Neighborhood Commercial and some of the development controls in the new NC districts would be altered. Allowable heights would be raised to 50 feet along Third Street and parking requirements may be reduced. New parking areas with common easements would be encouraged on the interior of lots. Third Street design guidelines would apply, as with the Project. Development would result in lesser diversity of land uses as compared to the Project, but would still be increased from existing conditions.

Health Center

In the Health Center Activity Node, existing Light Industrial would become medium-density Residential along the north portion of Third Street and PDR/Medium Commercial along the south portion of Third Street, while some other Light Industrial east of Third Street would

become Core PDR. Compared to the Project, the Health Center Activity Node would emphasize PDR instead of mixed uses and residential.

Oakinba

In the Oakinba Activity Node, existing Light Industrial zoning would become primarily Core PDR with some PDR/Large Commercial. Compared to the Project, the Oakinba Activity Node would have essentially the same zoning designations; however, a smaller area would be PDR/Large-Scale Commercial near Bayshore Boulevard and more area would be dedicated to Core PDR uses, compared to the mixed PDR/commercial zone along Industrial Way with the Project.

South Basin

In the South Basin Activity Node, Light Industrial within the Project would be Core PDR with transition areas of Light PDR between existing residential and industrial areas under Alternative B. Existing Residential and Neighborhood Commercial along Third Street would remain, with an increase in permitted density of residential uses. Compared to the Project, Alternative B would be the same, except for the portions of Third Street that would be zoned as mixed-use Neighborhood Commercial areas.

Hunters Point Shoreline

In the Hunters Point Shoreline Activity Node, existing Light Industrial within the Project would become the India Basin SUD. The zoning in this activity node remains the same with Alternative B as with the Project. The India Basin SUD would permit mixed uses in the industrial area and would encourage Bay- and community-oriented uses along the Evans-Hunters Point-Innes roadway.

Candlestick Point

In the Candlestick Point Activity Node, existing Light Industrial would become Core PDR, while the public use on the Candlestick Stadium and state park land would remain. As with the Project, the zoning in the Candlestick Point Activity Node would remain primarily for

public uses with a small area within this activity node undergoing a conversion of Heavy Industrial to Core PDR. With Alternative B, Proposition F would still apply. This ballot initiative established the Candlestick Point Special Use District for the construction of the new Stadium Development Retail/Entertainment Center.

IMPACTS

Land Use

As with the Project, Alternative B would increase potential for PDR activities in the Project Area, and also in the Eastern Neighborhoods, and the City as a whole. Because land currently zoned Heavy Industrial and Light Industrial would be converted to PDR zoning designations, industrial land uses would become separated from existing and planned residential uses while neighborhood commercial and open space uses would provide a transition zone between industrial and residential. By definition, development under PDR zoning would eliminate much of the industrial land use conflicts and nuisances that have historically occurred in the Bayview Hunters Point area.

As with the Project, Alternative B would not divide or disrupt an established community because the expected changes in land use would preserve much of the existing residential and industrial uses while building on existing land use patterns.

Employment, Housing, and Population

With Alternative B, housing demand associated with the increase in employment would be about 2,120 to 2,870 housing units, with the assumed commute adjustment figure (45 percent of workers live outside San Francisco). As with the Project, it is likely that the City would not provide sufficient housing to accommodate approximately 55 percent of its new workers over the next two decades.

Alternative B would result in approximately one-half the population growth in the Study Area compared to the Project, 10,550 compared to 20,896 residents. With Alternative B, citywide population would grow by about 80,200 residents (compared to about 88,100 with the Project).

between 2000 and 2025. The 10,550 new residents would account for approximately 13 percent of citywide growth, compared to about 29 percent with the Project.

In comparison, if the 2025 average of 3.31 persons per household were characteristic of the new households associated with all new employment, then the maximum of 5,011 new households would have a total population of 16,586 new residents (65 percent of that anticipated with the Project). With commute adjustment (45 percent of workers live outside San Francisco), a maximum of 2,756 new households would locate in San Francisco and would add approximately 9,122 residents (approximately 63 percent of the number estimated with the Project).

No impacts on population and housing would result from the implementation of Alternative B; however, the number of new housing units would be approximately 42 percent of the number expected with the Project, compared to employment growth equal to about 60 percent of amount expected with the Project. In addition, as a reduced population is anticipated under Alternative B, fewer beneficial impacts associated with businesses would occur due to a smaller population base with which to provide services. As with the Project, the percent of citywide housing units that would be required to accommodate Project Area workers is substantially greater than the percent of citywide employment growth represented by the Project Area.

Transportation and Circulation

Alternative B would be similar to the No Project Alternative, with a similar number of jobs, but with about 30 percent more housing units (about 860 units). Therefore, the analysis of impacts would be similar to the No Project Alternative for transportation impacts.

Alternative B, with substantially reduced development potential, would likely result in less intersection impacts than the Project, and slightly more impacts than the No Project Alternative. Alternative B would result in a significant unavoidable impact at the intersections of Third Street/Cesar Chavez Street, Third Street/Evans Avenue, Bayshore Boulevard/Silver Avenue, Bayshore Boulevard/Industrial Way/Alemany Boulevard, and Evans Avenue/Cesar Chavez Street.

With Alternative B, all freeway segments and freeway ramps with the exception of northbound US 101 south of I-280, would operate at LOS D or better. This would be a significant unavoidable adverse impact associated with the Alternative B, as with the Project.

Similar to development under the Project, Alternative B would not result in potentially significant impacts related to transit, pedestrian conditions, bicycle conditions, parking conditions.

Urban Design and Visual Quality

As with the Project, the overall visual quality of the Project Area would change with implementation of Alternative B, as infill development would be completed on various sites. The mixed-use development of vacant parcels and unused buildings would create new sources of light, but these sources would be typical of urban development elsewhere in San Francisco and would not generate obtrusive lighting that would be substantially visible from other districts or neighborhoods.

The reduced development potential with Alternative B would have similar visual effects as with the Project. As discussed above, zoning controls would generally remain the same for four of the seven activity nodes, compared to the Project. Those areas in which zoning controls would change would be the: 1) Northern Gateway Activity Node, which would include ‘Residential PDR’ instead of ‘Neighborhood Commercial Moderate Scale’ on the west side of Third Street; 2) Town Center Activity Node, which would include additional ‘Residential – Medium Density’ uses, but would eliminate the ‘Neighborhood Commercial Transit’ along Oakdale Avenue; 3) Health Center Activity Node, which would emphasize PDR uses instead of mixed-use and residential. In addition, compared to the Project, implementation of Alternative B would provide less intense development and less diversity of use within the BIT and IBIP areas.

Development with this Alternative could be approximately 10 to 20 feet taller than existing development, but would generally be comparable with the overall height and bulk of existing

buildings in the district. Views would not be substantially affected by new development, and would be considered a less-than-significant impact. Thus, as with the Project, development under this Alternative would not create substantial change in visual quality.

With respect to the Candlestick Point Activity Node, the Stadium Development Retail/Entertainment Center could be developed with this Alternative. The introduction of the Stadium Development Retail/Entertainment Center would change the visual character of the Candlestick Point State Recreation Area because a portion of the existing open space would be used for parking. In addition, the Stadium Development Retail/Entertainment Center would create an unavoidable increase in overall outdoor lighting levels. Similar to the Project, these two effects would be considered significant, unavoidable visual impacts to scenic views of the Bay.

Solar Access and Shading

As with the Project, development with Alternative B would be subject to requirements of *Planning Code* Section 295, including shadow studies to determine potential effects on public open space under Recreation and Parks Department jurisdiction. Therefore, projects implemented under this Alternative would also avoid significant adverse shadow effects on open space in the Project Area and vicinity, as with the Project.

Wind

As with the Project, Alternative B would permit buildings over a height of 100 feet. These taller buildings could adversely affect the street-level wind environment. Although Section 148 of the *Planning Code* does not apply in the Project Area, as it specifies comfort and hazard criteria for pedestrian level wind in certain zoning districts, project-specific wind analyses would be required for any proposed new buildings greater than 100 feet. Thus, as with the Project, no significant adverse wind impacts would be expected to occur with implementation of this Alternative.

Air Quality

Alternative B would continue development under a moderate housing scenario, and would result in somewhat fewer jobs and substantially fewer housing units. Construction projects would be required to implement BAAQMD emission reduction methods, as with the Project. Alternative B would result in a potentially significant impact related to TAC emissions. It is likely that this impact would be similar to, or less than, the Project as proposed buffer zones to separate industrial uses from other uses would be created while the amount of residential uses to potentially affect would be substantially less. As with the Project, no impact related to consistency with the 2000 Clean Air Plan and San Francisco *General Plan* would occur as growth would be within existing population growth assumptions, and no localized air quality effects would be expected.

Noise

Alternative B would continue development under a moderate housing scenario, and would result in somewhat fewer jobs and substantially fewer housing units. Alternative B would be similar to the No Project Alternative and would likely result in projected increases in noise levels at the most affected intersections of about 2 dBA or less; as with the Project, this would not be a significant adverse impact. The less than significant impacts related to construction noise, stationary source noise, location of sensitive receptors (existing and proposed), and cumulative traffic noise of the Project would be similar or less than the level identified with the Alternative B.

Cultural Resources

Generally, impacts on architectural and historic resources with Alternative B would be similar to those of the Project, as the type of uses allowed would not alter the potential for damage to cultural resources. Development would still occur within each activity node, and ground-disturbing activities could damage or destroy cultural artifacts potentially eligible for inclusion in the California Register of Historic Places (CRHP). In addition, activities on sites with structures in the Project Area assigned a status code of "3," "4," or "5" that would require

demolition, relocation, or substantial alterations to the structure or its immediate surrounding, could have a significant impact on historical resources. However, development with this alternative would allow approximately 60 percent of the total employees as that allowed with the Project, and approximately 40 percent of residential units. Thus, the potential for ground-disturbing activities or modification/demolition of buildings would be reduced; however, as with the Project, adverse impacts on cultural and historical resources would remain potentially significant.

Hazards and Hazardous Materials

As with the Project, compliance with existing controls and regulations would ensure that impacts related to hazards and hazardous materials would be less than significant. Specifically, implementation of this alternative would provide for increased opportunities for development of a range of land uses (e.g., industrial uses associated with production, distribution, and repair) in the activity nodes, and some of the future businesses would involve the use, handling, and storage of hazardous materials or involve the generation of hazardous wastes as part of normal business operations. Compliance with hazardous materials and hazardous waste regulations would minimize the risk for accidental releases and would ensure safe handling of hazardous materials and wastes at permitted facilities.

Compliance with existing hazardous materials controls during construction activities would minimize any potential impacts to public health or the environment during construction. As with the Project, construction impacts associated with the potential exposure to hazardous materials in soil or groundwater with Alternative B would be less than significant.

Modifications to the current zoning regulations would result in long-term changes in land use within the Project Area, which would involve the displacement and subsequent closure of some industrial land uses and the introduction of new businesses. As with the Project, because of the well established regulatory framework for site assessment and remediation, impacts related to exposure to hazardous materials due to land use changes would be less than significant. This alternative, as with the Project, would reduce some of the longstanding

conflicts between industrial and residential uses and decrease the exposure of residences to hazards associated with industrial activities.

Potential exposure to hazardous building materials from existing structures would be abated in accordance with applicable federal, state, and local laws prior to demolition or renovation. In addition, compliance with the *San Francisco Building Code* and *Fire Code* would ensure that potential hazards related to redevelopment activities (including those associated with hillside development, hydrant water pressure, and emergency access) would be minimized during the permit review process and that redevelopment projects would not interfere with an existing emergency evacuation plan. Thus, both impacts would remain less-than-significant under implementation of Alternative B.

Geology and Soils

With Alternative B, impacts associated with seismic and soil hazards would be similar to those with the Project including impacts to ground shaking, liquefaction, erosion, damage from settlement or instability of subsurface materials, asbestos, and corrosive soils. Site-specific geotechnical studies would be required by the San Francisco Department of Building Inspection, which would assess the nature and severity of the geologic hazards on the site and recommend project design and construction features that would reduce the hazards. In addition, development would be required to comply with existing regulations such as the Uniform Building Code and OSHA regulations, which provide standards designed to prevent or minimize potential damage. The decrease in total expected development with Alternative B would reduce the area and population exposed to these impacts, but the net effect for development that occurred in compliance with these regulations would be to avoid significant adverse effects from geologic hazards.

As with the Project, the upland areas of the Hunters Point Shoreline and Candlestick Point Activity Nodes have steep slopes, and development in these areas could expose people or structures to landslides, which would be considered a potentially significant impact with implementation of this alternative.

Because of the high ratio of older buildings in the Project Area and the high probability of major earthquakes on nearby active faults, Alternative B would not improve the overall seismic performance of the Project Area to the same extent as with the Project. This would be a less-than-significant effect of this alternative.

Hydrology and Water Quality

Alternative B would continue development under a moderate housing scenario, and would result in somewhat fewer jobs and substantially fewer housing units. Because development under Alternative B would be less than under the Project, water quality conditions would likely be the same or better under Alternative B.

Biotic Resources

Although Alternative B would decrease the potential for development, impacts would be similar to the Project. The Project Area is almost entirely built out and supports no known sensitive species. For this reason, Alternative B would not have a significant effect on sensitive species, wildlife movement, or species diversity.

Impacts associated with the potential loss of sensitive habitats or species that use these habitats would be similar to conditions with the Project. Construction activities within or near shoreline portions of the Project Area could directly impact wetlands, mud flats, or salt marsh habitats in a variety of ways, including placement of fill, structures, or alteration of habitat, which would be considered a potentially significant impact.

Public Services and Utilities

Alternative B would be similar to the Project, but with approximately 60 percent of employment growth and 40 percent of residential units than with the Project. Thus, it is anticipated that Alternative B would generate proportionally less future demand for police, fire, schools, community facilities, and parks in the Project Area, and impacts would remain less-than-significant.

In addition, Alternative B would result in proportionally less future demand for water supply, wastewater treatment, and solid waste disposal, and impacts would remain less-than-significant.

Energy

Alternative B would allow development of approximately 60 percent of employment growth and 40 percent of residential units than the Project. Development allowed under this alternative would not encourage activities that result in the use of large amounts of fuel or energy. Thus, it is anticipated that development would generate proportionally less demand than would the Project, and impacts on energy consumption would remain less-than-significant.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

While Alternative B would have less development than the Project, it would have substantially more residential development than, and development of the Stadium Development Retail/Entertainment Center in, the No Project Alternative. Therefore, Alternative B would have the same significant unavoidable impacts as the Project, including those related to urban design, lighting and deteriorated conditions at six intersections and one freeway segment.

Alternative B would have the same or similar impacts as the Project, and would require the same mitigation measures, with respect to visual quality, air quality, cultural resources, and biotic resources.

Although Alternative B would not achieve the goals of the Project, it would be considered the environmentally superior alternative, as it would represent a reduced level of development.

NOTES – *Alternatives*

¹ See Section III.C, Employment, Housing, and Population, pp. III.C-1 to III.C-2 for a discussion of the Study Area.

VII. REPORT PREPARERS

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APPENDIX A

NOTICE OF PREPARATION (NOP)



NOTICE OF PREPARATION



SAN FRANCISCO REDEVELOPMENT AGENCY

The Redevelopment Agency of the City and County of San Francisco ("San Francisco Redevelopment Agency" or "Agency") and the Planning Department of the City and County of San Francisco ("San Francisco Planning Department" or "Department") are the co-Lead Agencies preparing an Environmental Impact Report ("EIR") for the Bayview Hunters Point Redevelopment project identified below. The Agency and Department request your comments on the scope and content of the EIR. The Agency has conducted an initial environmental scoping of the proposed project and has identified areas of probable environmental effects. These probable environmental effects are summarized below.

The Agency is sending this notice to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the Agency, that also have a role in approving or carrying out the project. Responsible Agencies will need to use the EIR that we prepare when considering approvals related to the project. When the Draft EIR is published, it will be sent to all Responsible Agencies and to others who respond to this Notice of Preparation or who otherwise indicate that they would like to receive a copy.

Please send any response you may have within 30 days from the date you receive this notice. Your response, and any questions or comments, should be directed to Jose Campos, Planning Supervisor, San Francisco Redevelopment Agency, 770 Golden Gate Avenue, San Francisco, CA 94102; telephone 415-749-2442. Please reference case number 199.546E in your response.

PROJECT TITLE: 1996.546E: Bayview Hunters Point Redevelopment Projects and Rezonings

PROJECT LOCATION: The project site is the Bayview Hunters Point Redevelopment Survey Area and the existing India Basin Industrial Park, Hunters Point and Bayview Industrial Triangle Redevelopment Project Areas, located east of U.S. Highway 101, south of Cesar Chavez Street, west of San Francisco Bay and the Hunters Point Shipyard Redevelopment Project Area, and north of the San Francisco County boundary. [See attached map.]

PROJECT SPONSORS: San Francisco Redevelopment Agency and San Francisco Planning Department

PROJECT DESCRIPTION: The proposed project is a redevelopment program consisting of three redevelopment plan amendments to the existing Hunters Point, India Basin Industrial Park and Bayview Industrial Triangle Redevelopment Plans with proposed land use and zoning changes, the instituting of tax increment financing for the area added to the Hunters Point Redevelopment Project

and for the Bayview Industrial Triangle Redevelopment Project, and the rezoning of land in the Bayview Hunters Point area.

Discussion

The Bayview Hunters Point (“BVHP”) Redevelopment Area is in the southeast quadrant of the City and County of San Francisco and includes the BVHP Redevelopment Survey Area and the India Basin Industrial Park, Hunters Point and Bayview Industrial Triangle Redevelopment Project Areas. A multi-year, citizen-based planning effort for this area created the comprehensive *Bayview Hunters Point Community Revitalization Concept Plan* (“Concept Plan”), which was adopted by the citizen-elected Bayview Hunters Point Project Area Committee (“PAC”) in November 2000. The Concept Plan addresses the entire redevelopment study area, and puts forward an ambitious number of programs and policies for the community.

The San Francisco Redevelopment Agency has further refined these concepts and, working with the PAC, developed seven (7) specific economic development “activity nodes” that would serve as the focus for Agency activity in the area. In some instances, these nodes are the same as the districts or areas discussed in the Concept Plan; in other cases the nodes are smaller areas within a larger Concept Plan district. Thus, the redevelopment plans are not as broad as the Concept Plan in geographic scope; rather, the redevelopment plans focus on key nodes within the community.

The Agency proposes that blighted portions of the BVHP Redevelopment Survey Area be added to the Hunters Point Redevelopment Project Area in a redevelopment plan amendment creating the Bayview Hunters Point Redevelopment Project, and that appropriate land use districts be adopted for this blighted area. Concurrent with the amendment of the Hunters Point Redevelopment Project, the Agency proposes to amend the land use districts in the India Basin Industrial Park and Bayview Industrial Triangle Redevelopment Project Areas to be consistent with proposed land use and zoning changes in the adjoining Survey Area. In addition, tax increment financing would be instituted for the area added to the Hunters Point Redevelopment Project and for the Bayview Industrial Triangle Redevelopment Project. The three redevelopment projects encompass the seven activity nodes identified in the Concept Plan. Further rezoning of land in BVHP would be implemented by the San Francisco Planning Department, as recommended in the Concept Plan. Together, the redevelopment plans are referred to as the Bayview Hunters Point Redevelopment Plan Amendments.

The Bayview Hunters Point Redevelopment Plan would also apply three development frameworks for redevelopment in the activity nodes as well as the larger redevelopment areas. These frameworks are the Housing Program, the Economic Development Program, and a Community Enhancements Program. The activity nodes and development frameworks are described below.

The fundamental philosophy guiding the redevelopment and revitalization process for BVHP is that the plans should enhance and strengthen existing activities in the area for the benefit of current residents and employers, and not displace or replace them. This objective would be achieved through ongoing small- and medium-scale redevelopment and renovation efforts, not through extensive land clearing followed by new construction. The intent is to create opportunities for residents and

businesses to revitalize and strengthen the community's existing physical, social, and economic assets in a thoughtful and organized way.

Project Elements – Development Programs

Three framework programs have been established to provide clear standards and a guiding philosophy for housing, economic development and community enhancements that would apply throughout the redevelopment study areas as well as in the activity nodes.

Framework Housing Program

The *Framework Housing Program* will set forth the Agency process for creating new affordable housing units in BVHP. The *Framework Housing Program*, which would be continually consistent with the Citywide Comprehensive Affordable Housing Plan and would detail Agency and City action in BVHP. Of significance, Agency staff would strive to maintain the existing mix of ownership and rental housing. The affordable housing program encompasses a range of housing types, both rental and ownership, and including multi-bedroom family housing and one bedroom dwellings. The affordability target is set at the Bayview Area Median Income ("AMI"), which is lower than the Citywide AMI.

In addition, the Agency would implement a *Model Block Single-Family Rehabilitation Program* to address repair and improvement of single-family homes on a block-by-block basis in the community.

Economic Development Program

The intent of the economic development program is to facilitate new development that would be expected to directly and indirectly alleviate blight, and thereby stimulate private sector investment and development in BVHP, and job and entrepreneurial opportunities for local residents. The Economic Development Program would focus public investment in community revitalization within seven, community-identified Activity Nodes, and the Agency would adopt specific *Development Programs* for all or parts of each activity node from time to time, to guide the economic development that would occur within the specific Development Program area.

Key to the success of economic revitalization in BVHP is the under-construction Third Street Light Rail Project, which will create numerous opportunities for mixed use and other appropriate transit oriented development. Another key is the enhancement of the northern route onto the Shipyard, along Evans-Hunters Point Boulevard-Innes Avenue, and establishment of a southern route onto the Shipyard, along an extension of Carroll Avenue from Bayshore Boulevard to Third Street, up Carroll Avenue to Fitch Street, along Fitch Street across a bridge over Yosemite Slough, connecting with Crisp Avenue.

The development of locally-owned small businesses within the activity nodes would enable the community to take direct action to stop the market leakage, currently estimated at well over \$100 million annually. The fostering of local ownership and operation of new businesses throughout the

Third Street corridor and elsewhere in the community, and the associated significant increase in employment of community residents and the concurrent increase in affordable housing units, are crucial to increasing the attractiveness of the area for existing residents, to increasing the earning power of existing residents and businesses, and to precluding to the extent possible, the flight of existing residents and businesses from the area, particularly as outside businesses and new residents endeavor to move into the area to take advantage of economic opportunities, both residential and commercial.

Community Enhancements Program

A Community Enhancements Program will be established to improve and enhance community character through beautification of streets, establishment of a *Façade Improvement Program*, the creation of a *Green Streets* network, the improvement of existing community and recreational facilities and open spaces, and the construction of new urban plazas and mini-parks.

A *Framework Open Space Program* will be adopted by the Agency and City Recreation and Park Department to guide the improvement, maintenance and programming of Agency and City open spaces in the area. Where feasible and appropriate, the Agency will convey its open space parcels to the Recreation and Park Department, in order to bring all the major improved open spaces in BVHP under a single City jurisdiction, pursuant to the proposed *Framework Open Space Program*.

The Agency would also implement *Streetscape Plans* for the three major roadways in the community, Third Street, the northern route to the Shipyard, along Evans and Innes Avenues, and a new southern route into the Shipyard.

Project Elements – Activity Nodes

Seven geographic nodes have been identified for redevelopment in the BVHP community. These nodes are places where existing activities can be nourished, expanded, and concentrated, or where new activities can be fostered through infill, physical improvements, and targeted social programs.

The seven activity nodes include (1) the Northern Gateway Activity Node, centered on Third Street between Islais Creek and Jerrold Avenue; (2) the Town Center Activity Node, centered on Third Street between Jerrold Avenue and Williams – Van Dyke Avenue; (3) the Oakinba Activity Node, centered in the area bounded by Oakdale Avenue, Industrial Way and Bayshore Boulevard; (4) the Southeast Health Center Activity Node, centered on Third Street between Williams – Van Dyke Avenue and Carroll Avenue; (5) the South Basin Activity Node, for the M-1 industrial area from Bayshore Boulevard to South Basin on both sides of Yosemite Slough; (6) the Hunters Point Shoreline Activity Node, centered on Hunters Point Boulevard – Innes Avenue between Jennings Street and Hunters Point Shipyard; and (7) the Candlestick Point Activity Node, for the Candlestick Point Special Use District.

(1) The Northern Gateway Activity Node, centered on Third Street between Islais Creek and Jerrold Avenue, would include the following:

- Transit-oriented development adjacent to Third Street
- Mixed-use (residential over commercial-retail) projects
- Increased business and employment activities
- Promotion of locally-owned businesses and local entrepreneurs
- New residential development
- Retail, service-oriented, and light production and repair businesses
- Industrial uses to the east and west of the Third Street core

This activity node incorporates the northern part of the Town Center Focus Area Plan that, in the Concept Plan, extends from Evans Avenue to Williams Avenue.

This activity node also incorporates the north-central part of the Northern Industrial District Focus Area Plan that, in the Concept Plan, extends from Bayshore Boulevard to Piers 80-92 in the Port of San Francisco.

The juxtaposition of the Concept Plan and the Third Street Light Rail project creates an opportunity to revitalize the neighborhood with transit-oriented development projects, foster improvements to the environment and quality of life for residents and workers, and allow Third Street to fulfill its potential as a neighborhood-serving street.

(2) The Town Center Activity Node, centered on Third Street between Jerrold Avenue and Williams – Van Dyke Avenue, would include the following:

- New community space and consolidation of community services on Town Center Block
- Renovated Bayview Opera House
- Restaurants, neighborhood stores, and other compatible commercial businesses
- Promotion of locally-owned businesses and local entrepreneurs
- New housing units in mixed use (residential over commercial) buildings adjacent to Third Street

This activity node incorporates the central and southern portion of the Town Center Focus Area Plan that, in the Concept Plan, extends from Evans Avenue to Williams Avenue. The focus of revitalization work in Town Center will be rehabilitation of existing structures and limited infill development with the goal of preserving the historic character of Third Street.

(3) The Oakinba Activity Node, centered in the area bounded by Oakdale Avenue, Industrial Way and Bayshore Boulevard, would include the following:

- Vibrant commercial center
- Enhanced Production, Distribution and Repair (PDR) operations
- Compatibility with nearby residential neighborhoods and adjacent light industrial uses
- Larger-scale, City-serving commercial businesses on major arterial roads

This activity node incorporates the western part of the Northern Industrial Area Focus Area Plan that, in the Concept Plan, extends from Bayshore Boulevard to Piers 80-92 in the Port of San Francisco.

(4) The Southeast Health Center Activity Node, centered on Third Street between Williams – Van Dyke Avenue and Fitzgerald Avenue. This activity node would include the following:

- Transit-oriented development adjacent to Third Street
- Center for medical offices and clinics to serve the entire community
- Expanded Southeast Health Center
- Private medical offices and support services and businesses
- New housing, both senior and multi-family
- New retail businesses
- Promotion of locally-owned businesses and local entrepreneurs

This activity node incorporates the central portion of the South Basin District Focus Area Plan in both sides of Third Street. In the Concept Plan, this Focus Area Plan extends from Bayshore Boulevard to Yosemite Slough and South Basin.

(5) The South Basin Activity Node, for the industrial area from Bayshore Boulevard to South Basin on both sides of Yosemite Slough, would include the following:

- Transit-oriented development adjacent to Third Street
- Industrial uses to east and west of the Third Street core
- Buffering of homes from adverse environmental impacts caused by industrial uses
- Small-scale neighborhood commercial services
- Promotion of locally-owned businesses, PDR activities, and local entrepreneurs

This activity node incorporates that part of the South Basin District Focus Area Plan on either side (both west and east) of the Southeast Health Center Activity Node. In the Concept Plan, this Focus Area Plan extends from Bayshore Boulevard to Yosemite Slough and South Basin. The Concept Plan envisions a number of development centers within this activity node, including a large-scale commercial area along Bayshore Boulevard to the west, an eco-industrial park to the east, and a major waterfront park at Yosemite Slough on the eastern shoreline.

(6) The Hunters Point Shoreline Activity Node, centered on Hunters Point Boulevard – Innes Avenue between Jennings Street and Hunters Point Shipyard, would include the following:

- New housing on available infill development sites west of Innes Avenue
- Renovated Hunters View (Housing Authority) project
- Mixed-use neighborhood east of Innes Avenue
- Small industrial businesses
- Neighborhood-serving retail and commercial services and some residential units
- Water-oriented neighborhood
- Refuge for artists

This activity node incorporates the Hunters Point Shoreline Focus Area Plan in the Concept Plan.

(7) The Candlestick Point Activity Node, which consists of the Candlestick Point Special Use District, would include the following:

- New San Francisco 49ers football stadium
- New 1.2 million square foot retail shopping mall

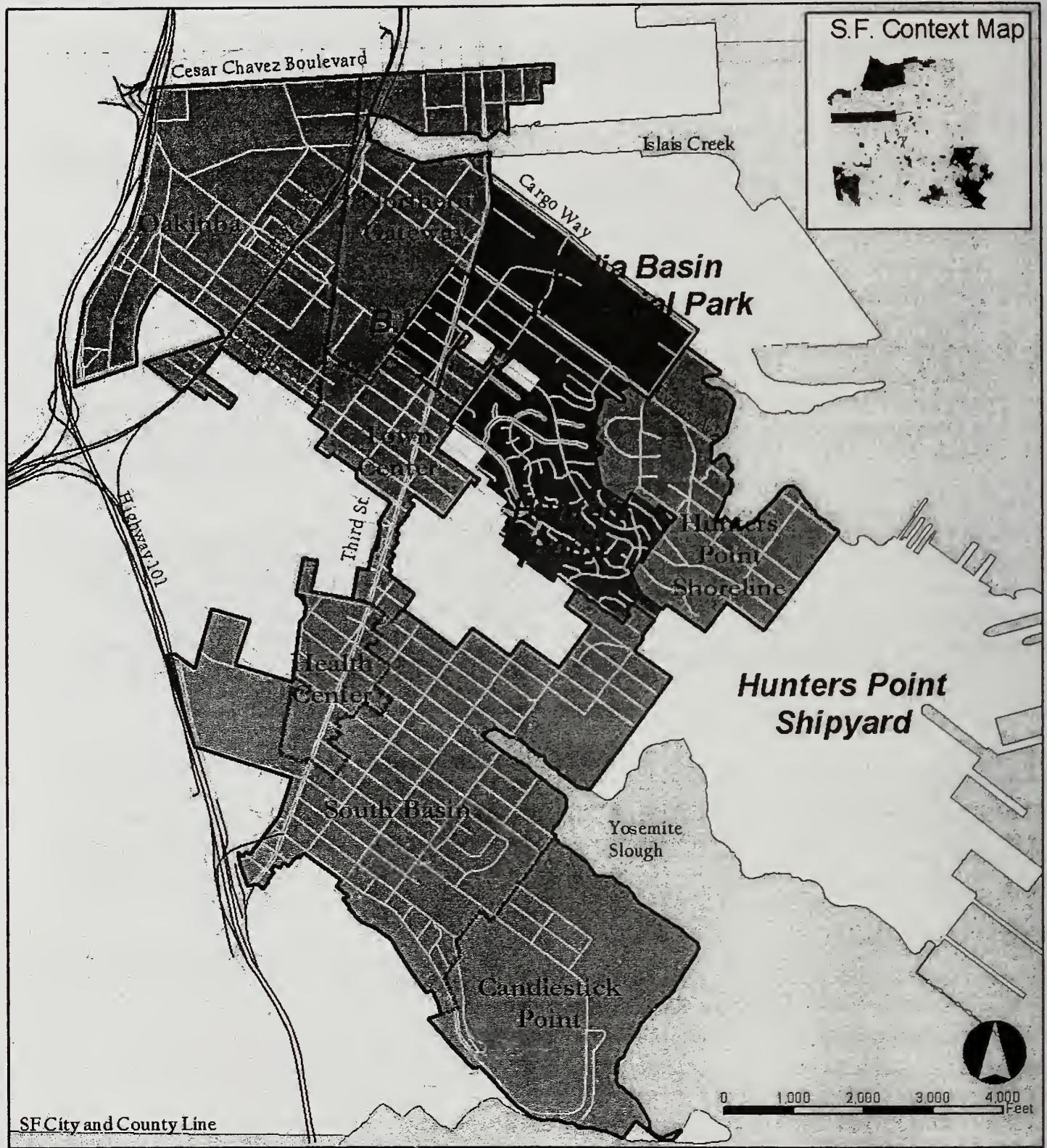
In June 1997, San Francisco voters approved Propositions D and F, which defined the new 49ers stadium and proposed mall. Proposition D authorized public financing in the form of lease revenue bonds for the Candlestick Point stadium and related infrastructure (including but not limited to, parking, streets and highways, and water and sewer systems), facilities, structures, equipment and furnishings. Proposition F approved the development of the stadium and mall project, making the necessary General Plan, Planning Code and Zoning Map amendments to amend the height limit to 200 feet for the stadium and 60 feet for the mall, and establishing the Candlestick Point Special Use District.

POTENTIAL ENVIRONMENTAL EFFECTS: Effects on land use compatibility and policy conformity; changes in population, employment and housing; cultural resources, including historical architectural resources: visual quality; shadows and wind; an increase in traffic and changes to traffic circulation; noise and air quality effects; exposure to hazardous materials; effects related to area geology and seismicity; hydrology, water quality, and biotic resources; increased demand for energy resources, public utilities, and public services; cumulative effects and growth inducing impacts.

DATE: June 03, 2003

Jose Campos
Planning Supervisor

FILE NO. ER03-3



Bayview Hunters Point Redevelopment Project & Activity Nodes

 San Francisco Redevelopment Agency
 June 06, 2003

- Activity Node Boundaries
- ████████ Existing Project Areas
- ████████ BVHP Proposed Project Area

APPENDIX B

HISTORIC RESOURCES SURVEY MATRIX

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
1	Northern Gateway	1514	Hudson Av	5
2	Northern Gateway	1546	Hudson Av	5
3	Northern Gateway	1548	Hudson Av	5
4	Northern Gateway	1552	Hudson Av	5
5	Northern Gateway	1556	Hudson Av	5
6	Northern Gateway	1560	Hudson Av	5
7	Northern Gateway	1566	Hudson Av	5
8	Northern Gateway	1580	Hudson Av	5
9	Northern Gateway	1520-22	Hudson Av	5
10	Northern Gateway	1516	Jerrold Av	5
11	Northern Gateway	1525	Jerrold Av	4
12	Northern Gateway	1527	Jerrold Av	4
13	Northern Gateway	1528	Jerrold Av	5
14	Northern Gateway	1555	Jerrold Av	5
15	Northern Gateway	1561	Jerrold Av	5
16	Northern Gateway	1700	Jerrold Av	5
17	Northern Gateway	1560-62	Jerrold Av	5
26	Northern Gateway	1566-68	Jerrold Av	5
20	Northern Gateway	1500	Kirkwood	4
21	Northern Gateway	1526	Kirkwood	5
22	Northern Gateway	1530	Kirkwood	4
23	Northern Gateway	1546	Kirkwood	5
24	Northern Gateway	1570-72	Kirkwood	5
25	Northern Gateway	1662-64	Kirkwood	5
26	Northern Gateway	3321	Third Stre	5
27	Northern Gateway	4301	Third Stre	5
28	Northern Gateway	n/a	Third Stre	5
1	SE Health Center	5700	Third Stre	5
2	SE Health Center	1775-77	Yosemite Av	4
1	HP Shoreline	881-887	Innes Ave	6 Survey-4, Here Today, p. 94
2	HP Shoreline	911	Innes Ave	4
3	HP Shoreline	900	Innes Ave	5
4	HP Shoreline	963	Innes Ave	5
5	HP Shoreline	973	Innes Ave	5
6	HP Shoreline	400	Hawes Str	5
1	Town Center	1635	Jerrold Av	4/5
2	Town Center	1501	Kirkwood	5
3	Town Center	1531	Kirkwood	4/5
4	Town Center	1541	Kirkwood	5
5	Town Center	1702	La Salle A	5
6	Town Center	1706	La Salle A	5
7	Town Center	1708	La Salle A	5
8	Town Center	1732	La Salle A	5
9	Town Center	1738	La Salle A	5
10	Town Center	1758	La Salle A	5/6
11	Town Center	1762	La Salle A	5

Highlighted text indicates changes or additions since the 2

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
1	Northern Gateway	1514	Hudson Avenue	c.1910	Queen Anne/Edwardian	Residence	DCP'76 Survey-1	5
2	Northern Gateway	1546	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
3	Northern Gateway	1548	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
4	Northern Gateway	1552	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
5	Northern Gateway	1556	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
6	Northern Gateway	1560	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
7	Northern Gateway	1566	Hudson Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5
8	Northern Gateway	1580	Hudson Avenue	c.1900	Bungalow	Residence		5
9	Northern Gateway	1520-22	Hudson Avenue	c.1940	Queen Anne/Edwardian	Residence		5
10	Northern Gateway	1516	Jerrold Avenue	c.1900	Queen Anne	Residence	DCP'76 Survey-0	5
11	Northern Gateway	1525	Jerrold Avenue	c.1880	Italianate/Eastlake	Residence	DCP'76 Survey-4	4
12	Northern Gateway	1527	Jerrold Avenue	c.1880	Italianate/Eastlake	Residence	DCP'76 Survey-4	4
13	Northern Gateway	1528	Jerrold Avenue	c.1890	Vernacular	Residence	DCP'76 Survey-1	5
14	Northern Gateway	1555	Jerrold Avenue	c.1900	Queen Anne	Residence	DCP'76 Survey-0	5
15	Northern Gateway	1561	Jerrold Avenue	c.1900	Queen Anne	Residence	DCP'76 Survey-1	5
16	Northern Gateway	1700	Jerrold Avenue	c.1940	Streamlined Moderne	Residence		5
17	Northern Gateway	1560-62	Jerrold Avenue	c.1940	Queen Anne	Residence	DCP'76 Survey-1	5
18	Northern Gateway	1566-68	Jerrold Avenue	c.1900	Queen Anne	Residence	DCP'76 Survey-1	5
19	Northern Gateway	1500	Kirkwood Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	4
20	Northern Gateway	1526	Kirkwood Avenue	c.1900	Queen Anne	Residence		5
21	Northern Gateway	1530	Kirkwood Avenue	c.1890	Italianate	Residence	DCP'76 Survey-1	4
22	Northern Gateway	1546	Kirkwood Avenue	c.1880	Victorian	Residence	DCP'76 Survey-0	5
23	Northern Gateway	1570-72	Kirkwood Avenue	c.1900	Queen Anne	Residence		5
24	Northern Gateway	1662-64	Kirkwood Avenue	c.1910	Edwardian	Residence		5
25	Northern Gateway	3321	Third Street	c.1927	Romanesque Revival	Fire Station		5
26	Northern Gateway	4301	Third Street	c.1920	Industrial	Warehouse		5
27	Northern Gateway	n/a	Third Street	c.1938	Streamlined Moderne	Bridge		5
1	SE Health Center	5700	Third Street	c.1920	Vernacular	Warehouse		5
2	SE Health Center	1775-77	Yosemite Avenue	c.1920	Early Industrial Modern	Warehouse		4
1	HP Shoreline	881-887	Innes Avenue	c.1870	Vernacular	Brewery	SF Landmark #60, DCP'76 Survey-4, Here Today, p. 94	4
2	HP Shoreline	911	Innes Avenue	c.1880	Italianate	Residence	DCP'76 Survey-0	4
3	HP Shoreline	900	Innes Avenue	c.1880	Victorian	Residence	DCP'76 Survey-1	5
4	HP Shoreline	963	Innes Avenue	c.1910	Vernacular	Residence		5
5	HP Shoreline	973	Innes Avenue	c.1910	Craftsman	Residence		5
6	HP Shoreline	400	Hawes Street	c.1920	Mission Revival	Church		5
1	Town Center	1635	Jerrold Avenue	c.1880	Queen Anne	Residence	DCP'76 Survey-0	4.5
2	Town Center	1501	Kirkwood Avenue	c.1890	Stick Style	Residence	DCP'76 Survey-3	5
3	Town Center	1531	Kirkwood Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	4.5
4	Town Center	1541	Kirkwood Avenue	c.1890	Victorian	Residence	DCP'76 Survey-2	5
5	Town Center	1702	La Salle Avenue	c.1880	Queen Anne	Residence	DCP'76 Survey-1	5
6	Town Center	1706	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5
7	Town Center	1706	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5
8	Town Center	1732	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5
9	Town Center	1738	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5
10	Town Center	1758	La Salle Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-1	5.5
11	Town Center	1762	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5

Highlighted text indicates changes or additions since the 2001 Survey

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
12	Town Center	1772-74	La Salle A	5
13	Town Center	1	Latona St	4
14	Town Center	1698	McKinnor	4
15	Town Center	1429	Mendell S	4
16	Town Center	1494	Newcomb	5
17	Town Center	1500	Newcomb	5
18	Town Center	1582	Newcomb	5
19	Town Center	1601	Newcomb	Survey-4, Here Today, p. 98 3
20	Town Center	1606	Newcomb	6
21	Town Center	1676	Newcomb	MB, OHP Rated 4S 4
22	Town Center	1028	Newhall S	5
23	Town Center	1440	Newhall S	Today, p. 98 3
24	Town Center	1540	Newhall S	5
25	Town Center	1505	Oakdale A	5
26	Town Center	1509	Oakdale A	5
27	Town Center	1547	Oakdale A	3
28	Town Center	1551-53	Oakdale A	5
29	Town Center	1629	Oakdale A	5
30	Town Center	1633	Oakdale A	5
31	Town Center	1635	Oakdale A	4
32	Town Center	1647	Oakdale A	5
33	Town Center	1651	Oakdale A	5
34	Town Center	1657	Oakdale A	5
35	Town Center	1663-65	Oakdale A	5
36	Town Center	1675	Oakdale A	5
37	Town Center	1679	Oakdale A	5
38	Town Center	1699	Oakdale A	5
39	Town Center	1700	Oakdale A	5
40	Town Center	1715	Oakdale A	5
41	Town Center	1729	Oakdale A	5
42	Town Center	1735	Oakdale A	5
43	Town Center	1737	Oakdale A	5
44	Town Center	1744	Oakdale A	5
45	Town Center	1748	Oakdale A	5
46	Town Center	1762	Oakdale A	4
47	Town Center	1766	Oakdale A	5
48	Town Center	1774-76	Oakdale A	5
49	Town Center	1790	Oakdale A	5
50	Town Center	1796	Oakdale A	5
51	Town Center	1863	Oakdale A	5
52	Town Center	1867	Oakdale A	5
53	Town Center	1877	Oakdale A	5
54	Town Center	1879	Oakdale A	5
55	Town Center	1881	Oakdale A	5
56	Town Center	1883	Oakdale A	5
57	Town Center	1885-87	Oakdale A	5
58	Town Center	1889	Oakdale A	5

Highlighted text indicates changes or additions since the 2

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
12	Town Center	1772-74	La Salle Avenue	c.1880	Italianate	Residence	DCP'76 Survey-I	5
13	Town Center	1	Latona Street	c.1871	Carpenter Gothic	Church	DCP'76 Survey-I	4
14	Town Center	1698	McKinnon Avenue	c.1910	Neoclassical	Residence	DCP'76 Survey-I	4
15	Town Center	1429	Mendell Street	c.1925	Art Deco	Mixed Use		4
16	Town Center	1494	Newcomb Avenue	c.1925	Spanish Revival	Residence	DCP'76 Survey-0	5
17	Town Center	1500	Newcomb Avenue	c.1915	Viennese Secessionist	Residence	DCP'76 Survey-I	5
18	Town Center	1582	Newcomb Avenue	c.1900	Queen Anne	Residence		5
19	Town Center	1601	Newcomb Avenue	c.1888	Stick Style	Opera House	SF Landmark #8, DCP'76 Survey-4, Here Today, p. 98	3
20	Town Center	1606	Newcomb Avenue	c.1888	Stick Style/modified	Church	Here Today, p. 98	6
21	Town Center	1676	Newcomb Avenue	1911	Mediterranean	Police Station	Bayview Police Station, UMB, OHP Rated 4S	4
22	Town Center	1028	Newhall Street	c.1800	Vernacular	Residence		5
23	Town Center	1440	Newhall Street	1886	Carpenter Gothic	Church	DCP'76 Survey-3, Here Today, p. 98	3
24	Town Center	1540	Newhall Street	c.1925	Eclectic/Revival	Residence		5
25	Town Center	1505	Oakdale Avenue	c.1910	Shingle Style	Residence		5
26	Town Center	1509	Oakdale Avenue	c.1920	Mission Revival	Church		5
27	Town Center	1547	Oakdale Avenue	c.1865	Carpenter Gothic	Residence	DCP'76 Survey-5	3
28	Town Center	1551-53	Oakdale Avenue	c.1800	Vernacular	Residence		5
29	Town Center	1629	Oakdale Avenue	c.1880	Italianate	Residence	DCP'76 Survey-0	5
30	Town Center	1633	Oakdale Avenue	c.1890	Queen Anne	Residence		5
31	Town Center	1635	Oakdale Avenue	c.1880	Italianate	Residence	DCP'76 Survey-0	4
32	Town Center	1647	Oakdale Avenue	c.1920	Transitional	Residence		5
33	Town Center	1651	Oakdale Avenue	c.1880	Italianate	Residence		5
34	Town Center	1657	Oakdale Avenue	c.1910	Transitional	Residence		5
35	Town Center	1663-65	Oakdale Avenue	c.1880	Stick Style	Residence	DCP'76 Survey-0	5
36	Town Center	1675	Oakdale Avenue	c.1880	Italianate	Residence	DCP'76 Survey-0	5
37	Town Center	1679	Oakdale Avenue	c.1895	Queen Anne	Residence		5
38	Town Center	1699	Oakdale Avenue	c.1890	Queen Anne	Residence	DCP'76 Survey-0	5
39	Town Center	1700	Oakdale Avenue	c.1910	Edwardian	Residence		5
40	Town Center	1715	Oakdale Avenue	c.1890	Queen Anne	Residence		5
41	Town Center	1729	Oakdale Avenue	c.1900	Vernacular	Residence		5
42	Town Center	1735	Oakdale Avenue	c.1880	Italianate	Residence		5
43	Town Center	1737	Oakdale Avenue	c.1880	Queen Anne (Eclectic)	Residence		5
44	Town Center	1744	Oakdale Avenue	c.1890	Queen Anne	Residence		5
45	Town Center	1748	Oakdale Avenue	c.1890	Queen Anne	Residence		5
46	Town Center	1762	Oakdale Avenue	c.1880	Italianate	Residence	DCP'76 Survey-0	4
47	Town Center	1766	Oakdale Avenue	c.1900	Queen Anne/Craftsman	Residence		5
48	Town Center	1774-76	Oakdale Avenue	c.1910	Beaux-Arts	Residence		5
49	Town Center	1796	Oakdale Avenue	c.1800	Queen Anne/Craftsman	Residence		5
50	Town Center	1796	Oakdale Avenue	c.1800	Queen Anne	Residence		5
51	Town Center	1863	Oakdale Avenue	c.1880	Italianate	Residence		5
52	Town Center	1867	Oakdale Avenue	c.1880	Queen Anne	Residence		5
53	Town Center	1877	Oakdale Avenue	c.1880	Italianate	Residence		5
54	Town Center	1879	Oakdale Avenue	c.1880	Italianate	Residence		5
55	Town Center	1881	Oakdale Avenue	c.1880	Italianate	Residence		5
56	Town Center	1883	Oakdale Avenue	c.1880	Italianate	Residence		5
57	Town Center	1885-87	Oakdale Avenue	c.1910	Edwardian	Residence		5
58	Town Center	1889	Oakdale Avenue	c.1880	Italianate	Residence		5

Highlighted text indicates changes or additions since the 2001 Survey

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
59	Town Center	1510	Palou Ave	5
60	Town Center	1548	Palou Ave	5
61	Town Center	1552	Palou Ave ^{today, p. 286}	5
62	Town Center	1621	Palou Ave	5
63	Town Center	1631	Palou Ave	5
64	Town Center	1661	Palou Ave	5/6
65	Town Center	1691	Palou Ave	5
66	Town Center	1758	Palou Ave	5
67	Town Center	1774	Palou Ave	5
68	Town Center	1776	Palou Ave	5
69	Town Center	1730	Quesada A	5
70	Town Center	1764	Quesada A	5
71	Town Center	1765	Quesada A	4
72	Town Center	1772	Quesada A	5
73	Town Center	1962	Quesada A	6
74	Town Center	1966	Quesada A	6
75	Town Center	4400	Third Stre	5
76	Town Center	4410 -34	Third Stre	5
77	Town Center	4417 -23	Third Stre	3
78	Town Center	4485	Third Stre	4
79	Town Center	4500	Third Stre	5
80	Town Center	4512	Third Stre	5
81	Town Center	4524 -26	Third Stre	5
82	Town Center	4606	Third Stre	5
83	Town Center	4614	Third Stre	4
84	Town Center	4618	Third Stre	4/5
85	Town Center	4622	Third Stre	5
86	Town Center	4636 -40	Third Stre	5
87	Town Center	4702	Third Stre	5
88	Town Center	4726	Third Stre	5
89	Town Center	4744	Third Stre	5
90	Town Center	4820	Third Stre	5
91	Town Center	4830	Third Stre	5
92	Town Center	4836	Third Stre	5
93	Town Center	4850	Third Stre	5
94	Town Center	4900	Third Stre	5
95	Town Center	4909 -11	Third Stre	5
96	Town Center	4910	Third Stre	5
97	Town Center	4912 -14	Third Stre	5
98	Town Center	4917 -19	Third Stre	4
99	Town Center	4918 -20	Third Stre	5
100	Town Center	4921 -23	Third Stre	5
101	Town Center	4928	Third Stre	4
102	Town Center	4942	Third Stre	4
103	Town Center	5000	Third Stre	4
104	Town Center	5001	Third Stre	5
105	Town Center	5005	Third Stre	4

Highlighted text indicates changes or additions since the 2

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
59	Town Center	1510	Palou Avenue	c.1890	Victorian	Residence	DCP'76 Survey-0	5
60	Town Center	1548	Palou Avenue	c.1865	Federal Revival	Residence	DCP'76 Survey-3	5
61	Town Center	1552	Palou Avenue	1895	Queen Anne	Residence	DCP'76 Survey-3, Here Today, p. 286	5
62	Town Center	1621	Palou Avenue	c.1880	Italianate	Residence		5
63	Town Center	1631	Palou Avenue	c.1890	Italianate	Residence		5
64	Town Center	1661	Palou Avenue	c.1900	Queen Anne	Residence		5
65	Town Center	1691	Palou Avenue	c.1890	Italianate Cottage	Residence		5
66	Town Center	1758	Palou Avenue	c.1890	Queen Anne (Free Classic)	Residence	DCP'76 Survey-0	5
67	Town Center	1774	Palou Avenue	c.1880	Queen Anne (Spindlework)	Residence		5
68	Town Center	1776	Palou Avenue	c.1890	Folk Victorian	Residence		5
69	Town Center	1730	Quesada Avenue	c.1880	Italianate	Residence		5
70	Town Center	1764	Quesada Avenue	c.1910	Queen Anne/Edwardian	Residence		5
71	Town Center	1765	Quesada Avenue	c.1909	Second Empire/Greek Revival	Residence		4
72	Town Center	1772	Quesada Avenue	c.1910	Queen Anne/Edwardian	Residence		5
73	Town Center	1962	Quesada Avenue	c.1940	Late Moderne	Residence		6
74	Town Center	1966	Quesada Avenue	c.1940	Late Moderne	Residence		6
75	Town Center	4400	Third Street	c.1930	Art Deco	Commercial		5
76	Town Center	4410 -34	Third Street	c.1880	Victorian	Mixed-Use		5
77	Town Center	4417 -23	Third Street	c.1880	Victorian	Residence	DCP'76 Survey-1	5
78	Town Center	4485	Third Street	c.1925	Art Deco	Commercial		4
79	Town Center	4500	Third Street	c.1890	Victorian	Mixed-Use		5
80	Town Center	4512	Third Street	c.1910	Commercial	Commercial		5
81	Town Center	4524 -26	Third Street	c.1890	Victorian	Mixed-Use		5
82	Town Center	4606	Third Street	c.1925	Art Deco	Mixed-Use		5
83	Town Center	4614	Third Street	c.1920	Mediterranean	Mixed-Use		4
84	Town Center	4618	Third Street	c.1890	Victorian/Commercial	Commercial		4.5
85	Town Center	4622	Third Street	c.1910	Spanish Revival	Mixed-Use		5
86	Town Center	4636 -40	Third Street	c.1900	Commercial/Vernacular	Commercial		5
87	Town Center	4702	Third Street	c.1890	Victorian	Mixed-Use	DCP'76 Survey-2	5
88	Town Center	4726	Third Street	c.1910	Spanish Revival	Mixed-Use		5
89	Town Center	4744	Third Street	c.1890	Victorian	Mixed-Use		5
90	Town Center	4820	Third Street	c.1910	Commercial/Vernacular	Commercial		5
91	Town Center	4830	Third Street	c.1920	Mediterranean/Stripped	Mixed-Use		5
92	Town Center	4836	Third Street	c.1920	Commercial/Vernacular	Commercial		5
93	Town Center	4850	Third Street	c.1920	Mediterranean	Mixed-Use		5
94	Town Center	4900	Third Street	c.1910	Commercial Vernacular	Mixed-Use		5
95	Town Center	4909 -11	Third Street	c.1910	Mediterranean	Mixed-Use		5
96	Town Center	4910	Third Street	c.1910	Vernacular	Mixed-Use		5
97	Town Center	4912 -14	Third Street	c.1910	Vernacular	Mixed-Use		5
98	Town Center	4917 -19	Third Street	c.1920	Mediterranean	Mixed-Use		4
99	Town Center	4918 -20	Third Street	c.1920	Mediterranean	Mixed-Use		5
100	Town Center	4921 -23	Third Street	c.1920	Mediterranean	Commercial		5
101	Town Center	4928	Third Street	c.1910	Mediterranean	Mixed-Use		4
102	Town Center	4942	Third Street	c.1900	Commercial/Vernacular	Commercial		4
103	Town Center	5000	Third Street	c.1925	Commercial/Classical	Bank		4
104	Town Center	5001	Third Street	c.1910	Mediterranean	Commercial		4
105	Town Center	5005	Third Street	c.1910	Vernacular	Mixed-Use		4

Highlighted text indicates changes or additions since the 2001 Survey

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
106	Town Center	5015	Third Street	4
107	Town Center	5021	Third Street	4
108	Town Center	5029	Third Street	5
109	Town Center	5030	Third Street	4
110	Town Center	5033	Third Street	5
111	Town Center	5100	Third Street	5
112	Town Center	5112	Third Street	5
113	Town Center	5116	Third Street	5
114	Town Center	5191	Third Street	5
115	Town Center	5118 -22	Third Street	5
116	Town Center	5126 -28	Third Street	4
117	Town Center	5129 -31	Third Street	5
118	Town Center	5130 -32	Third Street	5
119	Town Center	5135 -39	Third Street	5
120	Town Center	5158 -62	Third Street	5/6
121	Town Center	5164 -70	Third Street	4
122	Town Center	5172 -76	Third Street	5
123	Town Center	5175 -77	Third Street	5
124	Town Center	5250	Third Street	4
125	Town Center	5256 -60	Third Street	5
126	Town Center	5268	Third Street	5
127	Town Center	5273 -81	Third Street	5
128	Town Center	5288 -90	Third Street	5
129	Town Center	5538	Third Street	4
130	Town Center	1510	Underwood	5
131	Town Center	1571	Underwood	5
132	Town Center	1589	Underwood	5
133	Town Center	1595	Underwood	5
1	Oakinba	195	Bayshore Boulevard	5
2	Oakinba	221	Bayshore Boulevard	5
3	Oakinba	266	Bayshore Boulevard	5
4	Oakinba	272	Bayshore Boulevard	5
5	Oakinba	340	Bayshore Boulevard	5
6	Oakinba	367	Bayshore Boulevard	5
7	Oakinba	382	Bayshore Boulevard	5
8	Oakinba	390	Bayshore Boulevard	5
9	Oakinba	400	Bayshore Boulevard	5
10	Oakinba	228-32	Bayshore Boulevard	5
11	Oakinba	2323	Cesar Chavez Avenue	5
12	Oakinba	2275	Jerrold Avenue	5
13	Oakinba	2350	Jerrold Avenue	5
14	Oakinba	2390	Jerrold Avenue	5
15	Oakinba	2525	Marin Avenue	5
16	Oakinba	244	Napoleon Avenue	5

Highlighted text indicates changes or additions since the 20

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
106	Town Center	5015	Third Street	c.1880	Italianate	Mixed-Use	DCP'76 Survey-0	4
107	Town Center	5021	Third Street	c.1910	Vernacular	Mixed-Use		4
108	Town Center	5029	Third Street	c.1910	Vernacular	Commercial		5
109	Town Center	5030	Third Street	c.1900	Mediterranean	Mixed-Use		4
110	Town Center	5033	Third Street	c.1910	Vernacular	Commercial		5
111	Town Center	5100	Third Street	c.1940	Art Deco	Commercial		5
112	Town Center	5112	Third Street	c.1910	Vernacular	Commercial		5
113	Town Center	5116	Third Street	c.1920	Mediterranean	Mixed-Use		5
114	Town Center	5191	Third Street	c.1900	Vernacular	Mixed-Use		5
115	Town Center	5118 -22	Third Street	c.1920	Mediterranean	Commercial		5
116	Town Center	5126 -28	Third Street	c.1920	Mediterranean	Mixed-Use		4
117	Town Center	5129 -31	Third Street	c.1920	Mediterranean	Mixed-Use		5
118	Town Center	5130 -32	Third Street	c.1925	Art Deco	Mixed-Use		5
119	Town Center	5135 -39	Third Street	c.1920	Mediterranean	Mixed-Use		5
120	Town Center	5158 -62	Third Street	c.1910	Vernacular	Commercial		5
121	Town Center	5164 -70	Third Street	c.1910	Mediterranean	Commercial		4
122	Town Center	5172 -76	Third Street	c.1910	Mediterranean	Commercial		5
123	Town Center	5175 -77	Third Street	c.1910	Mediterranean	Mixed-Use		5
124	Town Center	5250	Third Street	c.1910	Craftsman	Residence		4
125	Town Center	5256 -60	Third Street	c.1900	Edwardian Vernacular	Mixed-Use		5
126	Town Center	5268	Third Street	c.1910	Vernacular	Residence		5
127	Town Center	5273 -81	Third Street	c.1910	Vernacular	Mixed-Use		5
128	Town Center	5288 -90	Third Street	c.1910	Mediterranean	Residence		5
129	Town Center	5538	Third Street	c.1920	Mediterranean	Residence		4
130	Town Center	1510	Underwood Avenue	c.1880	Queen Anne (Spindlework)	Residence		5
131	Town Center	1571	Underwood Avenue	c.1890	Queen Anne	Residence		5
132	Town Center	1589	Underwood Avenue	c.1890	Queen Anne	Residence		5
133	Town Center	1595	Underwood Avenue	c.1890	Queen Anne	Residence		5
1	Oakinba	195	Bayshore Blvd.	c.1910	Industrial Vernacular	Industrial		5
2	Oakinba	221	Bayshore Blvd.	c.1925	Art Deco	Commercial/Industrial		5
3	Oakinba	266	Bayshore Blvd.	c.1920	Commercial Vernacular	Commercial		5
4	Oakinba	272	Bayshore Blvd.	c.1920	Commercial Vernacular	Commercial		5
5	Oakinba	340	Bayshore Blvd.	c.1920	Commercial Vernacular	Commercial		5
6	Oakinba	367	Bayshore Blvd.	c.1930	Art Deco	Commercial		5
7	Oakinba	382	Bayshore Blvd.	c.1930	Commercial Vernacular	Commercial/Industrial		5
8	Oakinba	390	Bayshore Blvd.	c.1930	Late Moderne	Commercial/Industrial		5
9	Oakinba	400	Bayshore Blvd.	c.1930	Commercial Vernacular	Commercial/Industrial		5
10	Oakinba	228-32	Bayshore Blvd.	c.1910	Industrial Vernacular	Commercial/Industrial		5
11	Oakinba	2323	Cesar Chavez	c.1940	Moderne	Commercial		5
12	Oakinba	2275	Jerold Avenue	c.1920	Industrial Vernacular	Industrial		5
13	Oakinba	2350	Jerold Avenue	c.1920	Vernacular	Commercial/Residential		5
14	Oakinba	2390	Jerold Avenue	c.1920	Industrial Vernacular	Industrial		5
15	Oakinba	2525	Marin Avenue	c.1925	Art Deco	Commercial/Residential		5
16	Oakinba	244	Napoleon	c.1950	Quonset	Industrial		5

Highlighted text indicates changes or additions since the 2001 Survey

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
17	Oakinba	270	Napoleon	5
18	Oakinba	1863	Oakdale A	5
19	Oakinba	1867	Oakdale A	5
20	Oakinba	1884	Oakdale A	5/6
21	Oakinba	1895	Oakdale A	5
22	Oakinba	1907	Oakdale A	5
23	Oakinba	1921	Oakdale A	5
24	Oakinba	1951	Oakdale A	5
25	Oakinba	1955	Oakdale A	5
26	Oakinba	1975	Oakdale A	5
27	Oakinba	1983	Oakdale A	5/6
28	Oakinba	1987	Oakdale A	5/6
29	Oakinba	2011	Oakdale A	5/6
30	Oakinba	2016	Oakdale A	5
31	Oakinba	2018	Oakdale A	5
32	Oakinba	2019	Oakdale A	5
33	Oakinba	2031	Oakdale A	5
34	Oakinba	2035	Oakdale A	5
35	Oakinba	2039	Oakdale A	5
36	Oakinba	2100	Oakdale A	5
37	Oakinba	1877-83	Oakdale A	5
38	Oakinba	1887-93	Oakdale A	5
39	Oakinba	2118	Revere Av	5
40	Oakinba	2142	Revere Av	5
41	Oakinba	2150	Revere Av	5
42	Oakinba	2157	Revere Av	5/6
43	Oakinba	2158	Revere Av	5/6
44	Oakinba	2161	Revere Av	5
45	Oakinba	2165	Revere Av	5
46	Oakinba	2166	Revere Av	5
47	Oakinba	2171	Revere Av	5
48	Oakinba	2181	Revere Av	5
49	Oakinba	2184	Revere Av	5
50	Oakinba	2230	Revere Av	5
1	South Basin	1291	Egbert Ave	5/6
2	South Basin	1300	Egbert Ave	4
3	South Basin	1191	Fitzgerald	5
4	South Basin	1285	Fitzgerald	6
5	South Basin	1068	Gilman Av	5
6	South Basin	1183	Gilman Av	5
7	South Basin	1187	Gilman Av	5

Highlighted text indicates changes or additions since the 20

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
17	Oakinba	270	Napoleon	c.1920	Industrial Vernacular	Commercial/Industrial		5
18	Oakinba	1863	Oakdale Avenue	c.1900	Vernacular	Residence		5
19	Oakinba	1867	Oakdale Avenue	c.1900	Queen Anne	Residence		5
20	Oakinba	1884	Oakdale Avenue	c.1890	Eclectic/Modified	Residence		5/6
21	Oakinba	1895	Oakdale Avenue	c.1880	Italianate	Residence		5
22	Oakinba	1907	Oakdale Avenue	c.1900	Queen Anne	Residence		5
23	Oakinba	1921	Oakdale Avenue	c.1880	Italianate	Residence		5
24	Oakinba	1951	Oakdale Avenue	c.1880	Italianate	Residence		5
25	Oakinba	1955	Oakdale Avenue	c.1880	Italianate	Residence		5
26	Oakinba	1975	Oakdale Avenue	c.1890	Italianate	Residence		5
27	Oakinba	1983	Oakdale Avenue	c.1940	Revival	Residence		5.6
28	Oakinba	1987	Oakdale Avenue	c.1920	Edwardian	Residence		5.6
29	Oakinba	2011	Oakdale Avenue	c.1900	Queen Anne	Residence		5.6
30	Oakinba	2016	Oakdale Avenue	c.1920	Mission Revival	Residence		5
31	Oakinba	2018	Oakdale Avenue	c.1920	Vernacular	Residence		5
32	Oakinba	2019	Oakdale Avenue	c.1920	Vernacular	Residence		5
33	Oakinba	2031	Oakdale Avenue	c.1910	Vernacular	Residence		5
34	Oakinba	2035	Oakdale Avenue	c.1900	Queen Anne	Residence		5
35	Oakinba	2039	Oakdale Avenue	c.1900	Queen Anne	Residence		5
36	Oakinba	2100	Oakdale Avenue	c.1940	Vernacular	Residence		5
37	Oakinba	1877-83	Oakdale Avenue	c.1880	Italianate	Residence		5
38	Oakinba	1887-93	Oakdale Avenue	c.1910	Edwardian	Residence		5
39	Oakinba	2118	Revere Avenue	c.1910	Vernacular	Residence		5
40	Oakinba	2142	Revere Avenue	c.1910	Spanish Eclectic	Residence		5
41	Oakinba	2150	Revere Avenue	c.1910	Revival	Residence		5
42	Oakinba	2157	Revere Avenue	c.1900	Queen Anne	Residence		5.6
43	Oakinba	2158	Revere Avenue	c.1900	Queen Anne/Modified	Residence		5.6
44	Oakinba	2161	Revere Avenue	c.1940	Revival	Residence		5
45	Oakinba	2165	Revere Avenue	c.1925	Prairie/Vernacular	Residence		5
46	Oakinba	2166	Revere Avenue	c.1900	Vernacular	Residence		5
47	Oakinba	2171	Revere Avenue	c.1920	Craftsman/Vernacular	Residence		5
48	Oakinba	2181	Revere Avenue	c.1920	Mission/Eclectic	Residence		5
49	Oakinba	2184	Revere Avenue	c.1900	Queen Anne	Residence		5
50	Oakinba	2230	Revere Avenue	c.1900	Italianate/Modified	Residence		5
1	South Basin	1291	Egbert Avenue	c.1900	Queen Anne	Residence		5.6
2	South Basin	1300	Egbert Avenue	c.1880	Italianate	Residence	DCP'76 Survey-1	5
3	South Basin	1191	Fitzgerald Avenue	c.1900	Queen Anne	Residence		5
4	South Basin	1285	Fitzgerald Avenue	c.1890	Italianate	Residence		5
5	South Basin	1068	Gilman Avenue	c.1900	Queen Anne	Residence		5
6	South Basin	1183	Gilman Avenue	c.1900	Queen Anne	Residence		5
7	South Basin	1187	Gilman Avenue	c.1890	Victorian/Vernacular	Residence		5

Highlighted text indicates changes or additions since the 2001 Survey

TABLE B-1. BAYVIEW HUNTERS POINT RED

Resource Number	Activity Node	Address	Street	Carey & Co Rating
8	South Basin	1217	Gilman Av	5/6
9	South Basin	2907	Hawes Str	5
10	South Basin	2915	Hawes Str	5
11	South Basin	971	Hollister Av	5
12	South Basin	1045	Hollister Av	5
13	South Basin	1047	Hollister Av	5
14	South Basin	1071	Hollister Av	5
15	South Basin	1079	Hollister Av	5
16	South Basin	1110	Hollister Av	5
17	South Basin	1197	Hollister Av	5
18	South Basin	1215	Hollister Av	5
19	South Basin	1219	Hollister Av	5
20	South Basin	1235	Hollister Av	5
21	South Basin	1130-26	Hollister Av	5
22	South Basin	2816	Ingalls St	5
23	South Basin	783	Ingerson Av	5
24	South Basin	981	Ingerson Av	5
25	South Basin	1125	Ingerson Av	5/6
26	South Basin	922	Jamestown	5
27	South Basin	1082	Jamestown	5
28	South Basin	3220	Jennings St	5
29	South Basin	1075	Key Aven	5
30	South Basin	320	Paul Aven	HP Rated 3S
31	South Basin	1244	Shafter Av	5
32	South Basin	1269	Shafter Av	5
33	South Basin	6233	Third Stre	5
34	South Basin	1499	Underwo	5/6

TABLE B-1. BAYVIEW HUNTERS POINT REDEVELOPMENT PLAN - HISTORIC RESOURCES SURVEY MATRIX

Resource Number	Activity Node	Address	Street	Construction Date	Style	Historic Use	Historic Status	Carey & Co Rating
8	South Basin	1217	Gilman Avenue	c.1900	Queen Anne	Residence		5.6
9	South Basin	2907	Hawes Street	c.1900	Queen Anne	Residence		5
10	South Basin	2915	Hawes Street	c.1900	Queen Anne	Residence		5
11	South Basin	971	Hollister Avenue	c.1890	Queen Anne	Residence		5
12	South Basin	1045	Hollister Avenue	c.1890	Queen Anne Cottage	Residence		5
13	South Basin	1047	Hollister Avenue	c.1890	Queen Anne	Residence		5
14	South Basin	1071	Hollister Avenue	c.1890	Italianate	Residence		5
15	South Basin	1079	Hollister Avenue	c.1900	Queen Anne/Shingle Style	Residence		5
16	South Basin	1110	Hollister Avenue	c.1900	Queen Anne	Residence		5
17	South Basin	1197	Hollister Avenue	c.1910	Edwardian	Residence		5
18	South Basin	1215	Hollister Avenue	c.1900	Queen Anne Cottage	Residence		5
19	South Basin	1219	Hollister Avenue	c.1890	Victorian/Vernacular	Residence		5
20	South Basin	1235	Hollister Avenue	c.1900	Edwardian	Residence		5
21	South Basin	1130-26	Hollister Avenue	c.1940	Art Moderne	Residence		5
22	South Basin	2816	Ingalls Street	c.1890	Italianate/Queen Anne	Residence		5
23	South Basin	783	Ingerson Avenue	c.1900	Vernacular	Residence		5
24	South Basin	981	Ingerson Avenue	c.1900	Queen Anne	Residence		5
25	South Basin	1125	Ingerson Avenue	c.1900	Queen Anne	Residence		5.0
26	South Basin	922	Jamestown Avenue	c.1900	Vernacular/Eclectic	Residence		5
27	South Basin	1082	Jamestown Avenue	c.1900	Queen Anne	Residence		5
28	South Basin	3220	Jennings Street	c.1900	Queen Anne	Residence		5
29	South Basin	1075	Key Avenue	c.1900	Queen Anne	Residence		5
30	South Basin	320	Paul Avenue	1930	Spanish Revival	Institutional	Link Belt Co. Building, OHP Rated 3S	5
31	South Basin	1244	Shafter Avenue	c.1880	Italianate	Residence		5
32	South Basin	1269	Shafter Avenue	c.1930	Art Moderne	Residence		5
33	South Basin	6233	Third Street	c.1880	Italianate	Commercial		5
34	South Basin	1499	Underwood Avenue	c.1880	Vernacular Cottage	Residence		5.0

APPENDIX C

HAZARDOUS MATERIALS REGULATIONS AND DATABASE RESULTS

APPENDIX C HAZARDOUS MATERIALS

This appendix supplements the information provided in Section J of the EIR. It provides an overview of the hazardous materials regulatory framework; discusses relevant state, federal, and local statutes; documents regulatory databases reviewed to identify permitted hazardous materials uses and environmental cases within the Bayview Hunters Point Redevelopment Area; and identifies specific permitted hazardous materials use sites, environmental cases, and reported spill sites identified within the Bayview Hunters Point Redevelopment Area.

REGULATORY FRAMEWORK

Hazardous materials and hazardous wastes are extensively regulated by various federal, state, regional, and local regulations, with the major objective of protecting public health and the environment. This section summarizes the overall regulatory framework governing hazardous materials management.

FEDERAL REGULATIONS

The U.S. Environmental Protection Agency (U.S. EPA) is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include: the Resource Conservation and Recovery Act of 1974 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR).

RCRA was enacted in 1974 to provide a general framework for the national hazardous waste management system, including the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities. The Hazardous and Solid Waste Amendment was enacted in 1984 to better address hazardous waste; this amendment began the process of eliminating land disposal as the principal hazardous waste disposal method. Other specific areas covered by the amendment include regulation of carcinogens, listing and delisting of hazardous wastes, permitting for hazardous waste facilities, and leaking underground storage tanks.

CERCLA, also known as Superfund, was enacted in 1980 to ensure that a source of funds was available to clean up abandoned hazardous waste sites, compensate victims, address releases of hazardous materials, and establish liability standards for responsible parties. SARA amended CERCLA in 1986 to increase the Superfund budget, modify contaminated site clean up criteria and schedules, and revise settlement procedures. SARA also provides a regulatory program and fund for underground storage tank cleanups and Emergency Planning and Community Right- to- Know Program (EPCRA).

In 1976, Congress passed the Toxic Substances Control Act (TSCA) which was implemented in 1979. This act governs the manufacture, processing, distribution in commerce, use, cleanup, storage, and disposal of PCBs. Since 1978, the U.S. EPA has

promulgated numerous rules further addressing all aspects of the life cycle of PCBs. The most recent rule was the Final Rule: Amendments to the TSCA PCB Disposal Regulations Including Amendments to the PCB Notification and Manifesting Rule promulgated on June 24, 1999. This rule is deregulatory in nature and provides individuals with more flexibility in their PCB disposal practices while continuing to provide protection from unreasonable risk.

STATE AND REGIONAL REGULATIONS

The California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) are the primary state agencies regulating hazardous materials in California. These agencies are part of the Cal EPA. The RWQCB is authorized by the State Water Resources Control Board to enforce provisions of the Porter - Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation of the site, if necessary. The DTSC is authorized by the U.S. EPA to regulate the management of hazardous substances including the remediation of sites contaminated by hazardous substances.

California hazardous materials laws incorporate federal standards but are often stricter than federal laws. The primary state laws include: the California Hazardous Waste Control Law (HWCL), the state equivalent of RCRA; and the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), the state equivalent of CERCLA. State hazardous materials and waste laws are contained in the California Code of Regulations, Titles 22 and 26.

The HWCL, enacted in 1972 and administered by the DTSC, is the basic hazardous waste statute in California and has been amended several times to address current needs, including bringing the state law and regulations into conformance with federal laws. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small quantity generators, transportation and permitting requirements, as well as in its penalties for violations. The HWCL also exceeds federal requirements by mandating the recycling of certain wastes, requiring certain generators to document a hazardous waste source reduction plan, requiring permitting for federally exempt treatment of hazardous wastes by generators, and stricter regulation of hazardous waste facilities.

The HSAA, enacted in 1981, addresses similar concerns as CERCLA. The primary difference is in how liability is assigned for a site with more than one responsible party. This is important for petroleum clean up sites because federal law is usually used to force responsible party cleanups; state law is used for petroleum cleanup sites which are exempt from CERCLA.

Other relevant State of California statutes include:

- The Toxic Pit Cleanup Act of 1984 and the Toxic Injection Well Act of 1985 which were established to provide a regulatory framework for open pits or injection wells as a means of hazardous waste or disposal;
- The Hazardous Waste Management Act of 1986 which coordinates the state's implementation of federal landfill bans and authorizes landfill bans for non-RCRA hazardous wastes;
- The Aboveground Petroleum Storage Act of 1989 which requires the owner or operator of aboveground petroleum storage tanks to file a storage statement with the State Water Resources Control Board (SWRCB) if tank storage exceeds 10,000 gallons and holds petroleum or petroleum product which is liquid at ambient temperatures. In addition, the tank or tanks must be registered if they are subject to federal requirements; this potentially expands the requirement for a storage statement to any tank over 660 gallons or aggregate storage of 1,320 gallons;
- The Hazardous Waste Source Reduction and Management Act which required large quantity generators to document hazardous wastes being generated and to prepare a documented waste reduction plan beginning in 1991;
- The Hazardous Waste Treatment Permitting Reform Act of 1992 which required a permit for any hazardous waste treatment by a generator beginning on April 1, 1993. This statute established a new tiered permitting program whereby on-site treatment facilities are permitted or authorized to operate subject to different levels of regulatory requirements depending on the nature and size of the treatment activity. Amendments to this statute adopted in 1993-96 have enacted certain exemptions and modified compliance requirements.; and
- The Hazardous Waste Management Reform Act of 1995 which required the DTSC to revise its regulations to more closely conform to federal hazardous waste identification criteria and essentially eliminate land disposal restrictions for California-only hazardous wastes among other major changes. However, many of these changes have been deferred to a DTSC advisory committee for further study and are not expected to be implemented for several years, and in certain cases, not at all.

The Bay Area Air Quality Management District (BAAQMD), a regional regulatory agency, may impose specific requirements on remediation activities to protect ambient air quality from dust or other airborne contaminants.

LOCAL REGULATIONS

In accordance Chapter 6.11 of the Health and Safety Code (Section 25404, et seq.), the San Francisco Department of Public Health (SFDPH), is the primary local environmental

regulatory agency responsible for enforcement of City, state and federal environmental health codes and regulations. The SFDPH is the administering agency for the Certified Uniform Program Agency (CUPA) regulations in the City and County of San Francisco. As the CUPA, they are responsible for the following environmental programs:

- Hazardous materials business plans (Chapter 6.95 of the Health and Safety Code, Section 25501, et seq.);
- The California accidental release prevention program for acutely hazardous materials (Chapter 6.95 of the Health and Safety Code, Section 25531, et seq.);
- State Uniform Fire Code requirements (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshall pursuant to Health and Safety Code, Section 13143.9);
- Underground storage tanks (Chapter 6.7 of the Health and Safety Code, Section 25280, et seq.);
- Aboveground storage tanks (Health and Safety Code Section 25270.5(c); and
- Hazardous waste generator requirements (Chapter 6.5 of the Health and Safety Code, Section 25100, et seq.).

The SFDPH has the authority over monitoring the storage of flammable liquids, which includes underground tanks, and other hazardous materials. Under the local oversight program, the SFDPH also has a memoranda of understanding with the RWQCB that gives the City local oversight authority for leaking underground storage tank investigations and remediations. The San Francisco Fire Department (SFFD), Bureau of Fire Prevention and Investigation, conducts inspections of underground storage tank installations and has permit authority over the storage of flammable liquids.

BROWNFIELDS PROGRAMS

Abandoned, idled, or underused industrial and commercial facilities are referred to as *brownfields* and expansion or redevelopment of these facilities is complicated by real or perceived contamination. Historically, development of these sites has not been favored because of the unknown costs associated with cleanup of existing contamination and because of the potential for taking on long term liability associated with contamination at a property. Faced with these unknowns, developers have preferred development of “greenfields”¹ in outlying areas where there are no contamination concerns. This is costly not only because of the lost tax revenues on abandoned and idled properties, but because local governments must levy new taxes to pay for construction of new roads, sewers, schools, residences, and other infrastructure for the development on “greenfield”

¹ Greenfields are land where there have been no previous commercial or industrial land use.

properties. This not only wastes tax dollars, but also adds to the burden on the environment.

The USEPA and the DTSC have each developed programs to promote and expedite the cleanup of brownfields while reducing the potential liability to lenders and developers of contaminated properties.

Federal Brownfields Initiative

The USEPA began the Brownfields Initiative Program in 1995 to remove the barriers to the reuse of brownfields throughout the country and has leveraged billions of dollars from the public and private sectors for redevelopment of brownfields throughout the country. Through passage of the Brownfields Revitalization Act in 2002, effective policies that the US EPA had enacted over the years were passed into law. The Brownfields Revitalization Act expanded the US EPA's assistance by providing new tools for the public and private sectors to promote sustainable brownfields reuse and cleanup.

The USEPA Brownfields program is built on four pillars:

- Protecting the environment;
- Promoting partnerships;
- Strengthening the market place; and
- Sustaining reuse.

One of the primary ways the Brownfields Revitalization Act works towards building state and local capacity is to provide small amounts of seed money to the local government for two year pilot projects to build capacity and partnerships at the local level, while developing innovative approaches to brownfields issues. The pilot programs not only provide initial funding, but offer continued general and technical assistance to meet clean up goals. Brownfields pilots fall under several categories including:

- Brownfields Assessment Pilots which provide funding for environmental assessments and community outreach;
- Brownfields Cleanup Revolving Loan Fund Pilots which provide funding to capitalize loans that are used to cleanup brownfields;
- Brownfields Job Training and Development Demonstration Pilots that provide environmental training for residents of brownfields communities;
- Brownfields Cleanup Grants that provide direct funding for cleanup activities at certain properties with planned greenspace, recreational, or other nonprofit uses.
- Resource Conservation and Recovery Act/Brownfields Prevention Pilots that utilize the inherent flexibility in RCRA regulations to prevent brownfields from forming on RCRA properties;

- Brownfields Showcase Communities which serve as national models for successful brownfields assessment, cleanup, and redevelopment; and
- Targeted Brownfields Assessments which provide funding and/or technical assistance for environmental assessments at selected brownfields sites not targeted by EPA Assessment Pilots.

Since 1995, the US EPA launched two major initiatives to broaden the application of the Brownfields Initiative: The RCRA Brownfields Prevention Initiative and the UST Initiative. The RCRA Brownfields Prevention Initiative was implemented in 1999 to encourage the use of potential RCRA Brownfields so that the land would better serve the needs of the community either through more productive commercial or residential development or as greenspace. A potential RCRA Brownsfield is a RCRA facility that is not in full use, where there is redevelopment potential, and where reuse or redevelopment of that site is slowed due to real or perceived concerns about potential contamination, liability, and RCRA requirements. The first four pilots were initiated in 2000. A second round of five pilots was initiated in the summer of 2001. (US EPA, 2004a).

The UST Initiative was implemented in 2000 to address sites that have been affected by releases of petroleum products and were generally excluded from the Brownfields Initiative because petroleum contamination is generally excluded from coverage under CERCLA. Under this program, the US EPA has awarded 50 pilot grants of \$100,000 to states and tribes for the assessment and cleanup of petroleum-affected brownfields sites. Although no new USTfields pilot grants will be made, funding for similar assessment and cleanup projects is available through the Brownfields assessment, cleanup, and revolving loan fund grants and through the LUST trust fund (US EPA, 2004b)

Benefits of the Brownfields Initiative include community empowerment and economic revitalization for disadvantaged neighborhoods. Pilot grants result in local workforce development and job training programs. Environmental assessments conducted through the Initiative have removed contamination and liability uncertainties from thousands of sites across the country. The benefits of brownfields pilot projects outlive the duration of the pilots themselves, leveraging state, local, and private investment long after federal funds are expended (USEPA, 2001).

State Brownfields Initiative

To help address the development of brownfields by streamlining the regulatory process and reduce liability to prospective developers and lenders, the DTSC has developed a state Brownfields Program which includes a number of new regulatory tools and integrates other existing regulatory tools (CalEPA, 2001). These tools include the:

- The Cleanup Loans and Environmental Assistance to Neighborhoods (CLEAN) Program enacted in 2000 and provides low interest loans to help owners, developers, schools, local governments, and other accelerate the pace of cleanup and redevelopment of abandoned and underused urban properties;
- Voluntary Cleanup Program established in 1993 and allows DTSC to provide oversight to motivated parties to assess and/or cleanup lower priority sites;

- Expedited Remedial Action Program (SB923), a pilot voluntary cleanup program which provided numerous incentives to responsible parties to accelerate environmental cleanup work;
- Prospective Purchaser Agreements, providing legal protection to purchasers or developers who are willing to clean up contaminated properties;
- Cal Sites Validation Program, a reevaluation and update of DTSC's automated database which is used to track properties that may be affected by hazardous substances. Reevaluation was completed in 1996 and resulted in removing over 22,500 erroneous entries, thereby removing the brownfields stigma associated with the site;
- Private Site Management Program (AB 1876), allowing qualified individuals to oversee site assessments and cleanups at less complex hazardous materials sites;
- Local Cleanup Agreements (SB 1248), formally recognizing local agency cleanup programs allowing local health agencies to enter into written agreements to supervise cleanups, set cleanup goals, and provide certification of cleanup completion;
- Management Memo #90-11, Responsible Party – Ownership of Property Over Contaminated Groundwater, ensuring owners of property onto which a plume of contaminated groundwater has migrated that they will not become a target of enforcement or cost recovery solely on the basis of land ownership provided that they do not cause or contribute to contamination;
- Management Memo #92-4, Approval of Partial Site Cleanup, allowing issuance of a “clean parcel letter” for sites where a designated portion of the property has been cleaned up;
- Unified Agency Review of Hazardous Materials Release Sites (AB 2061), establishing a Site Designation Committee for designating a single “administering agency” to oversee response actions for a site if petitioned by the responsible party;
- California Lender Liability (SB 1285) a law enacted in 1996 providing limited liability exemption for lenders and fiduciaries for releases of hazardous materials on property in which they have legal interest, but did not “directly” cause or contribute to a release or potential release of hazardous materials;
- Polanco Legislation for Redevelopment Agencies (AB 3193), granting local redevelopment agencies qualified immunity from state or local laws if cleanup is conducted in accordance with a remedial action plan approved by the DTSC, RWQCB, or local agency. The liability immunity extends to property successors and lenders;
- Mello-Roos Community Facilities Act Amendments (AB 2610), creating the first long-term financing options for hazardous materials cleanup by

- empowering Community Facilities Districts to levy special taxes and issue bonds to provide funds for site cleanups; and
- California Land Environmental Restoration and Reuse Act (SB 32) which allows local regulatory agencies to require site assessments at potentially contaminated sites and streamlines the regulatory oversight for further investigation and cleanup of these sites.

HAZARDOUS MATERIALS MANAGEMENT

This section addresses specific requirements for hazardous materials management including requirements for:

- Hazardous Materials Business Plans (HMBP);
- California Accidental Release Program (CalARP);
- Aboveground storage tanks,
- Lead-based paint abatement;
- Polychlorinated biphenyls;
- Waste disposal; and
- Health and safety.

RISK MANAGEMENT -- HAZARDOUS MATERIALS BUSINESS PLANS AND INVENTORIES

Businesses that handle hazardous materials over certain threshold quantities are required by the State of California to submit an HMBP to the SFDPH as the local administering agency in the City and County of San Francisco. This document is used by City and County emergency response agencies for chemical emergency planning. The HMBP includes an inventory of hazardous materials used, and it is required to include the following:

- specific details on the facility covered by the plan, such as name and address;
- an inventory of hazardous materials used and stored;
- a site and facility layout;
- emergency response procedures;
- procedures for immediate notification of the administering agency in the event of an emergency;

- evacuation plans in the event of an emergency;
- a description of the training employees have received in the evacuation and safety procedures; and
- identification of local emergency medical assistance.

RISK MANAGEMENT – CALIFORNIA ACCIDENTAL RELEASE PROGRAM

The California Accidental Release Prevention (CalARP) program requires that facilities with processes handling more than a threshold quantity of a regulated acutely hazardous substance must be evaluated to determine the potential for accidental releases from that covered process. Under certain conditions specified by the CalARP regulation, the owner or operator is required to prepare and submit a risk management plan (RMP) to the SFDPH. The requirement for the RMP submission is in addition to a submission of an HMBP.

The owner or operator should coordinate with the SFDPH to determine the appropriate level of documentation required for an RMP. Depending on the types of processes and the quantities of regulated substances being handled, the facility is subject to one of three RMP program levels, as specified in the CalARP regulation. The RMP may include the following requirements, depending on the program level:

- Analyze a worst case accidental release scenario, as specified in the regulation;
- For existing processes that are subject to the CalARP regulation, complete a five-year accident history;
- Develop and implement a management system for handling the regulated substances;
- Conduct a hazard assessment to develop accidental releases from the process that are more credible than the worst case analysis identified above;
- Develop and implement an emergency response program; and
- Submit, as part of the RMP, data on prevention program elements.

ABOVE GROUND STORAGE TANKS

Title 40 of the Code of Federal Regulations, Section 112 also contains requirements for above ground storage of petroleum products. In accordance with these regulations, a petroleum tank of greater than 660 gallons or aggregate storage of over 1,320 gallons, which could reasonably discharge to a navigable water, is required to have a Spill Control and Countermeasure Plan (U.S. EPA Region IX, San Francisco, has taken a conservative stance, that virtually any large oil spill in California will enter federally regulated waters). The plan would include appropriate spill containment or equipment used to divert spills

from sensitive areas, a discussion of facility specific requirements for the storage system, inspections and a record keeping system, security for the system, and personnel training.

LEAD-BASED PAINT ABATEMENT

Lead-based paint is defined by state and federal regulations as paint containing lead at a concentration of 5,000 milligrams per kilogram (or 0.5%) or greater. In accordance with regulatory guidance, lead-based paint waste that has been separated from building materials (such as delaminated or chipping paint) must be evaluated separately from other building materials for waste disposal purposes during building demolition. Accordingly, any chipping or delaminated paint would need to be removed before any renovation or demolition activities. Depending on the level of lead identified in the paint, it may require disposal as a hazardous waste. Building materials which still have the paint adhered to them may generally be disposed of as regular construction debris, regardless of the lead level in the paint.

The Lead in Construction Standard contained in Title 29 of the Code of Federal Regulations, Section 1926.62 applies to the removal of chipping or delaminated lead-based paint. In accordance with this standard, it is necessary for workers to wear respiratory protection until the work is completed or until an employee exposure assessment can demonstrate that air lead levels during scraping are below the PEL. Other applicable requirements of the standard include worker awareness training, use of protective clothing, provisions for change areas and hand washing facilities, biological monitoring, and development of a site specific compliance program. California regulations relating to the abatement of lead-based paint are contained in Title 8 of the California Code of Regulations, Section 1532.1). These state regulations are similar to the Federal regulations.

POLYCHLORINATED BIPHENYLS (PCBs)

PCB-containing oil was historically used in transformers and other electrical equipment. With the implementation of TSCA, the U.S. EPA banned the use of PCB-containing oil and prohibited the use of PCB-containing oil in electrical transformers in July of 1979.

On June 29, 1998, the U.S. EPA issued its final rule concerning known and potential PCB-containing equipment. The regulations categorize transformers into these three categories on the basis of their PCB content:

- Non-PCB: Transformers containing less than 50 ppm of PCBs;
- PCB-Contaminated: Transformers containing 50 to less than 500 ppm of PCBs; and
- PCB: Transformers containing 500 ppm of PCBs or greater.

Under the final rule, in-use transformers whose PCB content is unknown but were manufactured before July 2, 1979 should be assumed to be non-PCB. In-use transformers

manufactured before July 2, 1979 should be considered PCB-contaminated if filled with mineral oil and PCB if filled with a fluid other than mineral oil.

Under the final rule, the following electrical equipment can be considered non-PCB in the absence of sampling to demonstrate otherwise:

- transformers with less than 3 pounds of fluid;
- circuit breakers;
- reclosers;
- oil-filled cable; and
- rectifiers.

The actual PCB content of all transformers, regardless of the date of manufacture, must be determined prior to disposal. In addition, all transformers known or assumed to contain PCBs were required to be registered with the federal government by December 28, 1998 whether in use or in storage for reuse.

WASTE DISPOSAL

All California landfills have been segregated by regulatory authority into the categories of Class I, Class II and Class III facilities. Class I facilities can accept hazardous wastes with chemical levels below the federal land disposal restriction (land ban) treatment standards. Class II and III facilities can accept non-hazardous wastes that meet acceptance criteria determined by the state for organic and inorganic compounds. Each landfill has individual acceptance criteria and the appropriate disposal site for a waste would be determined on the basis of the classification of the waste and individual landfill acceptance criteria.

In accordance with state and federal regulations, a waste is hazardous if it:

- Is a listed hazardous waste as defined in RCRA; or
- Exhibits the characteristics of ignitability, corrosivity, reactivity, or toxicity as defined in the California Code of Regulations.

Hazardous materials and hazardous wastes are defined in the California Code of Regulations, Title 22, Sections 66260 through 66261.10. A waste is considered toxic if it contains certain metals or organic substances at concentrations greater than federal toxicity regulatory levels using a test method called the TCLP;² if it contains certain substances at concentrations greater than the state regulatory levels, including the total

² A waste would be considered hazardous if it contains a soluble concentration of the specified substance at a concentration greater than the federal toxicity characteristic level specified in CCR, Title 22, Section 66261.24 (a)(i). The soluble concentration is determined using the TCLP, which involves a 20-to-1 dilution of the sample. Because of this, the total concentration of a substance would need to exceed 20 times the TCLP level for the soluble concentration to possibly be greater than the TCLP level.

threshold limit concentration TTLC³ or the STLC;⁴ if it contains specified carcinogenic substances at a single or combined concentration of 0.001 percent; or if toxicity testing indicates toxicity greater than specified criteria.

Class II and III landfills in the Bay Area have acceptance criteria for lead that are lower than the TCLP or STLC. Soil with total petroleum hydrocarbon concentrations above the detection limit must be disposed of at an appropriate landfill facility or treated to reduce the levels of petroleum hydrocarbons in the soil. In general, soil with total petroleum hydrocarbon levels up to 100 milligrams per kilogram can be disposed of at a Class III disposal facility. If the concentration is between 100 and 1,000 milligrams per kilogram, it can be disposed of at a Class II disposal facility; and if the concentration is greater than 1,000 milligrams per kilogram, Class I disposal would be required.

Lead-based paint would be considered a hazardous waste because the total lead concentration would be greater than the TTLC of 1,000 milligrams per kilogram. It would be necessary to dispose of the paint at a Class I facility.

The California Department of Toxic Substances Control has classified friable, finely divided and powdered wastes containing greater than one- percent asbestos as a hazardous waste.⁵ A friable waste can be reduced to powder or dust under hand pressure when dry. Non-friable asbestos-containing wastes are not considered hazardous and are not subject to regulation under Title 22, Division 4.5 of the California Code of Regulations. The management of these wastes would still be subject to any requirements or restrictions which may be imposed by other regulatory agencies. The state standard for classification of asbestos wastes is contained in Section 66261.24 of Title 22 of the California Code of Regulations. Asbestos is not currently regulated as a hazardous waste under the RCRA; because of this it is considered a non-RCRA waste. Asbestos wastes, totaling more than 50 pounds, must be transported by a registered waste hauler to an approved treatment, storage or disposal facility.

Wastes containing asbestos may be disposed of at any landfill which has waste discharge requirements issued by the RWQCB that allow disposal of asbestos-containing materials, provided that the wastes are handled and disposed of in accordance with the Toxic Substances Control Act, the Clean Air Act's National Emission Standards for Hazardous Air Pollutants, and Title 22 of the Code of California Regulations (Division 4.5). The Department of Toxic Substances Control also has treatment standards for asbestos-containing wastes, which require submittal of a notification and certification form to the land disposal facility as well as wetting and containment of the asbestos-containing materials.

³ In accordance with CCR, Title 22, Section 66261.24(a)(2), a waste would be considered hazardous on the basis of toxicity if it contains the specified substance at a total concentration greater than the TTLC.

⁴ In accordance with CCR, Title 22, Section 66261.24(a)(2), a waste would be considered hazardous on the basis of toxicity if it contains the specified substance at a soluble concentration greater than the STLC. The soluble concentration is determined by performing a Waste Extraction Test, which involves at 10-to-1 dilution of the sample. Because of this, the total concentration of a substance would need to exceed 10 times the STLC for the soluble concentration to possibly be greater than the STLC.

⁵ California Department of Toxic Substances Control, *Fact Sheet, Asbestos Handling, Transport and Disposal*, October 1993.

The owner of properties where hazardous wastes are produced or abatement would occur must have a Hazardous Waste Generator Number assigned by and registered with the California Department of Toxic Substances Control in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest, which details the hauling of the material from the site and the disposal of the material.

HAZARDOUS MATERIALS WORKER SAFETY REQUIREMENTS

The Federal Occupational Safety and Health Administration (Fed OSHA) and the California Safety and Health Administration (Cal OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the Code of Federal Regulations, Title 29 (29 CFR) as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal OSHA standards are generally more stringent than federal regulations.

The state regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

REGULATORY DATABASE REVIEW

A regulatory database review was conducted to identify permitted hazardous materials uses, environmental cases, and spill sites within the Bayview Hunters Point Redevelopment Area (EDR, 2004). The databases reviewed are listed in Tables C-1 and C-2 with the date of each database reviewed. Each database is described in the following sections.

FEDERAL REGULATORY DATABASES

Federal agencies publish numerous lists of sites that track permitted uses of hazardous materials and environmental cases. The lists reviewed are summarized in Table C-1. They include:

- The National Priority List (NPL) which is a subset of the CERCLIS database (described below) and includes priority sites for cleanup under the federal Superfund Program;

TABLE C-1 FEDERAL REGULATORY DATABASES REVIEWED

Name of List	Responsible Agency	Acronym	Date of List
National Priority List	USEPA	NPL	1/29/04
Proposed National Priority List Sites	USEPA	Proposed NPL	1/7/04
Superfund Consent Decrees	USEPA	CONSENT	N/A
Records of Decision	USEPA	BRS	1/9/04
Federal Superfund Liens	USEPA	NPL LIENS	10/15/91
National Priority List Deletions	USEPA	Delisted NPL	1/29/04
Comprehensive Environmental Response, Compensation, and Liability Information System	USEPA	CERCLIS	11/17/03
CERCLIS- No Further Remedial Action Planned	USEPA	CERCLIS NFRAP	11/17/03
Toxic Chemical Release Inventory System	USEPA	TRIS	12/31/01
Emergency Response Notification System	USEPA	ERNS	12/31/02
Hazardous Materials Information Reporting System	USDOT	HMIRS	12/18/03
Resource Conservation and Recovery Information System	USEPA	RCRIS	1/12/04
Biennial Reporting System	USEPA	BRS	12/1/01
RCRA Corrective Action Sites	USEPA	CORRACTS	12/18/03
RCRA Administrative Action Tracking System	USEPA	RAATS	4/17/95
Department of Defense Sites	USGS	DOD	10/1/03
Storm Water General Permits	USEPA	STORMWATER	N/A
Brownfields Sites	USEPA	US BROWNFIELDS	7/15/03
Risk Management Plans	USEPA	RMP	N/A
Facility Index System	USEPA	FINDS	10/23/03
PCB Activity Database System	USEPA	BRS	9/30/03
Toxic Substances Control Act	USEPA	TSCA	12/31/02
Federal Insecticide, Fungicide and Rodenticide Act/TSCA	USEPA	FTTS	10/16/03
Federal Insecticide, Fungicide and Rodenticide Act/TSCA	USEPA	FTTS INSP	10/16/03

Section 7 Tracking Systems	USEPA	SSTS	12/31/01
Material Licensing Tracking System	NRC	MLTS	1/15/04
Underground Storage Tanks on Indian Land	US EPA	INDIAN UST	12/5/03
Leaking Underground Storage Tanks on Indian Land	US EPA	INDIAN LUST	2/9/04
Mines Master Index File	MSHA	MINES	11/25/03

Source: Environmental Data Resources, 2004

The Proposed NPL sites (Proposed NPL) which includes sites proposed for addition to the NPL;

- Superfund Consent Decrees (CONSENT) which includes NPL sites with major legal settlements that establish responsibility and standards for cleanup;
- Records of Decision (ROD) list which includes NPL sites where a record of decision has been developed that mandates a permanent remedy and includes technical and health information to aid in the cleanup of the site;
- Federal Superfund Liens (NPL LIENS) list which includes sites where the US EPA has filed liens against real property to recover remedial action expenditures or the property owner has been issued a notification of potential liability;
- National Priority List Deletions (Delisted NPL) which includes sites that have been removed from the NPL because no further response is required in accordance with criteria contained in the National Oil and Hazardous Substances Pollution Contingency Plan;
- The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) which tracks potentially contaminated properties identified under CERCLA and SARA;
- The CERCLIS No Further Remedial Action Planned (CERCLIS-NFRAP) database which lists sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require federal Superfund action or NPL consideration. As part of the U.S. EPA's Brownfields Program, these sites have been removed from the CERCLIS database to lift unintended barriers to redevelopment;
- The Toxic Chemical Release Inventory System (TRIS) which identifies sites which release chemicals to the air, water, or land as required by Title III of the Superfund Amendments and Reauthorization Act of 1986;
- The Emergency Response Notification System (ERNS) which identifies spills of oil or hazardous substances reported pursuant to Section 103 of CERCLA as amended, Section 311 of the Clean Water Act, and sections 300.51 and 300.65 of the National Oil and Hazardous Substances Contingency Plan;
- The Hazardous Materials Information Reporting System (HMIRS) which includes hazardous material spill incidents that were reported to the US Department of Transportation;

- Resource Conservation and Recovery Act (RCRA) Information System (RCRIS) which includes facilities permitted to handle hazardous wastes under RCRA including treatment, storage, and disposal facilities (RCRA-TSD); large quantity generators which report generation of greater than 1000 kilogram per month of non-acutely hazardous waste or 1 kilogram per month of acutely hazardous waste (RCRA-LQG); and small quantity generators which report generation of less than 1000 kilogram per month of non-acutely hazardous waste or 1 kilogram per month of acutely hazardous waste (RCRA-SQG);
- Biennial Reporting System (BRS) which is a national system administered by the EPA that collects data on the generation and management of hazardous wastes. RCRA Large Quantity Generators and Treatment, Storage, and Disposal facilities are included;
- RCRA Corrective Action Sites (CORRACTS) which includes RCRA permitted facilities that are undergoing corrective action. A corrective action order is issued, when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA;
- RCRA Administrative Action Tracking System (RAATS) which includes enforcement actions taken under RCRA pertaining to major violations including administrative and civil actions brought by the US EPA;
- Department of Defense Sites (DOD) which includes federally owned or administered lands, administered by the Department of Defense, that have an area equal to or greater than 640 acres of the United States, Puerto Rico, and the US Virgin Islands;
- Storm Water General Permits (STORMWATER) which includes facilities with Storm Water General Permits;
- Brownfields Sites (US BROWNFIELDS) which includes properties addressed by Cooperative Agreement Recipients and Targeted Brownfields Assessments;
- Risk Management Plans (RMP) which includes sites that handle extremely hazardous materials that are regulated under Section 112(r) of the Clean Air Act Amendments of 1990;
- Facility Index System (FINDS) which includes facility information and “pointers” to other sources that contain more detail. The following databases are included in FINDS: Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); Enforcement Dockets (DOCKET);

Federal Underground Injection Control (FURS); Criminal Docket System (C-Docket); Federal Facilities Information System (FFIS); State Environmental Laws and Statutes (STATE); and PCB Activity Database System (PADS);

- PCB Activity Database System (PADS) which includes generators, transporters, commercial storers, and/or brokers and disposers of PCBs who are required to notify the USEPA of such activities;
- Toxic Substances Control Act (TSCA) list which includes manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list;
- Federal Insecticide, Fungicide, and Rodenticide Act/TSCA (FTTS) list which includes administrative cases and pesticide enforcement actions and compliance actions related to the Federal Insecticide, Fungicide, and Rodenticide Act;
- Federal Insecticide, Fungicide, and Rodenticide Act/TSCA (FTTS INSP) list which includes inspection information for cases regulated under the Federal Insecticide, Fungicide, and Rodenticide Act;
- Section 7 Tracking Systems (SSTS) which includes pesticide-producing establishments that are registered with the USEPA in accordance with the requirements of Section 7 of the Federal Insecticide, Fungicide, and Rodenticide Act;
- The Material Licensing Tracking System (MLTS) which includes sites that possess or use radioactive materials which are subject to Nuclear Regulatory Commission licensing requirements;
- Underground Storage Tanks on Indian Land (Indian UST) which includes sites with underground storage tanks (USTs) that are located on Indian owned land;
- Leaking Underground Storage Tanks on Indian Land (Indian LUST) which includes leaking USTs that are located on Indian owned land; and
- Mines Master Index File (MINES) which includes properties that have been involved in mining including coal mining, quarrying, or sand and gravel operations.

STATE REGULATORY DATABASES

Regulatory databases to track the status of environmental cases are also maintained by several state agencies. The state databases reviewed are summarized in Table C-2. They include:

TABLE C-2 STATE REGULATORY DATABASES REVIEWED

Name of List	Responsible Agency	Acronym	Date of List
Annual Work Plan	DTSC	AWP	10/31/94
California Bond Expenditure Plan	DHS	CA BOND EXP PLAN	1/1/89
List of Deed Restrictions	DTSC	DEED	1/5/04
Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing	RWQCB	SLIC Reg2	3/28/03
Calsites	DTSC	CAL-SITES	11/30/03
Voluntary Cleanup Program Properties	DTSC	VCP	11/30/03
Properties Needing Further Evaluation	DTSC	NFE	11/30/03
Leaking Underground Storage Tank Information System	SWRCB	LUST	4/2/03
Fuel Leak List	RWQCB	LUST Reg2	1/21/04
Solid Waste Information System	Cal IWMB	SWF/LF	11/14/03
Waste Management Unit Database	SWRCB	WMUDS/SWAT	4/1/00
Cortese Hazardous Waste and Substances Sites List	Cal EPA	CORTESE	4/1/01
Toxic Pits Cleanup Act Sites	SWRCB	TOXIC PITS	7/1/95
Waste Discharge System	SWRCB	CA WDS	12/15/03
Proposition 65 Records	SWRCB	NOTIFY 65	10/21/93
No Further Action Determination	DTSC	NFA	11/30/03
Unconfirmed Properties Referred to Another Agency	DTSC	REF	11/30/03
School Property Evaluation Program	DTSC	SCH	11/30/03
California Hazardous Material Incident Report System	Cal OES	CHMIRS	12/31/02
Hazardous Waste Information System	Cal EPA	HAZNET	12/31/02
Active UST Facilities	SWRCB	CA UST	4/2/03
Facility Inventory Database	Cal EPA	CA FID UST	10/31/94
Hazardous Substance Storage Container Database	SWRCB	HIST UST	10/15/90
Aboveground Petroleum Storage Tank Facilities	SWRCB	AST	12/1/03

Name of List	Responsible Agency	Acronym	Date of List
Cleaner Facilities	DTSC	CLEANERS	11/26/03
Emissions Inventory Data	CARB	EMI	12/31/01
Local Oversight Facilities	San Francisco DPH	LUST SF	12/9/03
Underground Storage Tank Information	San Francisco DPH	UST SF	12/9/03

Source: Environmental Data Resources, 2004

- The Annual Work Plan (AWP), formerly known as the Bond Expenditure Plan, identifies hazardous substance sites targeted for cleanup;
- The California Bond Expenditure Plan (CA BOND EXP PLAN) includes sites for which a site-specific expenditure plan has been prepared for the appropriation of California Hazardous Substance Cleanup Bond Act of 1984 funds. This list is no longer updated;
- List of Deed Restrictions (DEED) which lists sites which have been issued deed restrictions because of the presence of hazardous substances;
- The Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing (SLIC Reg2) which include various sites within the jurisdiction of the Central Valley RWQCB;
- Calsites (CAL-SITES), which was previously referred to as the Abandoned Sites Program Information System (ASPIS), identifies potential hazardous waste sites, which are then screened by the DTSC for further action. Sites on this list which are designated for no further action by the DTSC were removed from this list in 1996;
- Voluntary Cleanup Program Properties (VCP) which includes low threat level properties with either confirmed or unconfirmed releases and the project proponents have requested that the DTSC oversee investigation and/or cleanup activities;
- Properties Needing Further Evaluation (NFE) which includes properties that are suspected of being contaminated, but contamination has not been confirmed. These sites would be assessed using the DTSC Preliminary Endangerment Assessment process;
- The Leaking Underground Storage Tank Information System (LUST) which is an inventory of sites with reported leaking underground storage tank incidents maintained by the State Water Resources Control Board;
- The Fuel Leak List (LUST Reg2) which tracks remediation status of known leaking underground tanks within the jurisdiction of the Central Valley RWQCB;
- The Solid Waste Information System (SWF/LF) which includes a list of active, inactive or closed solid waste disposal sites, transfer facilities, or open dumps, as legislated under the Solid Waste Management and Resource Recovery Act of 1972;
- The Waste Management Unit Discharge System (WMUDS/SWAT) which tracks waste management units. The list contains sites identified in the

following databases: Facility Information; Scheduled Inspections Information; Waste Management Unit Information; SWAT Program Information; SWAT Report Summary Information; Chapter 15 Information; Chapter 15 Monitoring Parameters; TPCA Program Information; RCRA Program Information; Closure Information; and Interested Parties Information;

- Cortese Hazardous Waste and Substances Sites List (CORTESE) which includes sites designated by the State Water Resources Control Board (LUST cases), Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (CAL-SITES);
- Toxic Pits Cleanup Act Sites (TOXIC PITS) which includes sites suspected of containing hazardous substances where cleanup has not yet been completed;
- The Waste Discharge System (CA WDS) which lists sites which have been issued waste discharge requirements;
- Proposition 65 Records (NOTIFY 65) which includes facility notifications about any release which could threaten drinking water and thereby expose the public to a potential health risk;
- No Further Action Determination (NFA) which includes properties at which the DTSC has made a clear determination that the property does not pose a problem to the environment or to public health;
- Unconfirmed Properties Referred to Another Agency (REF) which includes properties where contamination has been confirmed and which were determined not to require direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local agency;
- School Property Evaluation Program (SCH) which includes proposed and existing school sites that are being evaluated by DTSC for possible hazardous material contamination. In some cases, these properties may be listed in the Cal-Sites category depending on the level of threat they pose to public health and safety or to the environment;
- California Hazardous Materials Incident Reporting System (CHMIRS) which includes reported hazardous materials accidental releases or spills;
- The Hazardous Waste Information System (HAZNET) which includes facility and manifest data for sites that file hazardous waste manifests with the DTSC. The information contained in the database is based on manifests submitted without correction, and therefore may contain some invalid information;
- The Active UST Facilities list (CA UST) which lists registered USTs;

- The Facility Inventory Database (CA FID UST) which is a historical listing of active and inactive underground storage tank locations. Local records should contain more current information;
- The Hazardous Substance Storage Container Database (HIST UST) which is a historical listing of UST sites. Local records should contain more specific information;
- The Aboveground Petroleum Storage Tank Facilities database (AST) which lists registered ASTs;
- The Cleaner Facilities database (CLEANERS) which lists drycleaner related facilities that have EPA identification numbers; and
- Emissions Inventory Data (EMI) which includes sites for which the California Air Resources Board and local air pollution control agencies have collected toxic and criteria pollutant emission data.

LOCAL REGULATORY DATABASES

Local regulatory databases reviewed include the Local Oversight Facilities list which identifies leaking underground storage tanks and the Underground Storage Tank Information List which identifies permitted USTs. Both lists are maintained by the SFDPH.

SPECIFIC PERMITTED USES, ENVIRONMENTAL CASES, AND REPORTED SPILL SITES

Information from each environmental database was compiled by address to identify specific facilities permitted for hazardous materials uses, environmental cases, and spill sites. This level of analysis is important for the evaluation of hazardous materials impacts because many sites can be listed in more than one database. Compiled information for permitted hazardous materials uses, environmental cases, cases that have been closed or referred to another agency, and reported spill sites is summarized in Tables C-3, C-4, C-5, and C-6, respectively.

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Table C-3
Permitted Hazardous Material Use Sites Identified in Redevelopment Area

EDR Site No.	Activity Node	Site Name	Address	RCRIS				EMIS- FINDS				Other Site Nos.	
				RCRIS LQG	RCRIS SQG	UST	CAFID	HIST	UST	AST	DRY CLEANERS	TRIS	
489	CP	Candle Stick Point	Waste Resources Technology, Inc./ GB Debris					x			x	x	x
474	CP	CCSF R & P	Candlestick Park				x				x		x
Total Number of Sites in Activity Node				2	0	0	0	1	1	0	0	1	1
Health Center													
335	HC	Mayta & Jensen O'Keefe Inc.	101 Williams Ave. 75 Williams Ave. 45 Williams Ave.				x				x		x
338	HC	Facility 21155-1/ Superior Wood Finishes											x
339	HC	Walgreens No. 54877/ Commercial Construction/ AMB/ BTS	5300 Third St.			x					x		x
343	HC	The Serta Building/ Charles Silverman/ Preservation Properties	1777 Yosemite Ave			x					x		x
343	HC	Borsian Cabinets	1775 Yosemite Ave.								x		
343	HC	Mayta & Jensen	1790 Yosemite Ave.			x					x		
345	HC	Four Mile Cleaners	2200 Lane St.			x	x				x	x	x
348	HC	West Coast Plumbing	2230 Lane St.			x	x				x		x
348	HC	Tack Corporation	5411 Third St.								x		
362	HC	Unocal #3500	5545 Third St.			x					x		
364	HC	Armstrong Truck Equipment, Inc.	1730 Armstrong Ave.								x		
366	HC	Kotick MFG Co.	5600 Third St.			x					x		x
372	HC	California Fleetworks, Inc.	1623 Yosemite Ave.								x		
376	HC	Theo Defriese and Sons	2300 Keith St.								x	x	x
376	HC	7-Up Bottling Company	1590 Yosemite Ave.			x	x				x		
391	HC	Twigs, The/ 5700 Third St./Lorrie Deb Bldg.	5700 Third St.			x	x				x		
394	HC	Chinese Journal Corporation	1600 Armstrong Ave.								x		

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST	DRY CLEANERS	TRIS SIONS	EMIS FINDS	HAZNET FINDS	Other Site Nos.
394 HC	CCSF-DPH Southeast Health Center	2401 Keith St.		x	x	x	x				x	x	x
405 HC	Coca-Cola USA	5800 Third St.									x	x	
409 HC	A.M. Devincenzi Trucking Co.	Bancroft/Keith Sts.											
415 HC	Devincenzi Trucking Company	1598 Carroll Ave.	x								x		
417 HC	Dean's Refrigerated Trucking	1600 Donner Ave.											
430 HC	Swiss American Sausage	5990 Third St.	x								x		
440 HC	Giannini & Holland	1474 Egbert Ave.									x		
	Total Number of Sites in Activity Node	25		0	5	1	11	4	0	0	0	2	13
257 HP	Hunters Point Shoreline Pepsi Cola/ Broadway Mechanical/Former Marelich Mechanical/ Former Marelich Property	200 Jennings St.		x	x	x	x	x	x	x	x	x	x
	VIP Imaging Incorporated AL/ A Lason Company Pacific Bell	1 Newhall St.		x							x	x	
276 HP	Hunters Point Power Plant	Evans and Middlepoint Road	x								x	x	x
280 HP	San Francisco Housing Authority	1000 Evans Ave.	x								x	x	x
285 HP	San Francisco Unified School District	127 W. Point Rd.									x	x	x
301 HP	George Paizi Trustee/Vacant Odaco Inc.	350 Harbor Rd									x	x	
305 HP	Naval Shipyard Mil Spec House, The RF J Meiswinkel Co. Doherty Painting & Construction	966 Innes Ave.									x	x	x
308 HP	India Basin Boat Yard/Donco Industries Inc.	Building 134 Hunters Point	x								x	x	x
308 HP	Mee Corp.	1 Hunters Point Blvd.	x								x	x	
308 HP	United Building Contractors	Hunters Point Naval Shipyard	x								x	x	
313 HP		930 Innes Ave.	x								x	x	
316 HP		860 Innes Ave.									x	x	
316 HP		894 Innes Ave.									x	x	
319 HP		895 Innes Ave.									x	x	
		800 Innes Ave.											

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST CLEANERS	DRY TRIS	EMIS SIONS	HAZNET FINDS	Other Site Nos.
330 HP	San Francisco Housing Authority	San Francisco Housing	18 Northbridge								x	
332 HP	Hunters Point Wreck Center	Hunters Point Wreck Center	195 Kiska Rd.								x	
333 HP	San Francisco Housing Authority	San Francisco Housing	90 Kiska Rd.								x	
337 HP	Steven Mitchell Trucking	Steven Mitchell Trucking	50 Reardon Rd.	x							x	
357 HP	N.H.P. Inc.	N.H.P. Inc.	65 Navey Dr.							x		
Total Number of Sites in Activity Node				20	1	7	1	3	2	1	0	1
Northern Gateway												
88 NG	F.J. Burns Drayage	F.J. Burns Drayage	630 Cesar Chavez St.		x	x				x		
90 NG	CCSF Muni Granex/ Graney Corp USA/ CCSF Muni Railway	CCSF Muni Granex/ Graney Corp USA/ CCSF Muni Railway	1301 Cesar Chavez St.	x	x	x				x	x	
90 NG	Y.C. Yang Exchange Linen Service of CA/ American Linen/ 1575 Indiana St.	Y.C. Yang Exchange Linen Service of CA/ American Linen/ 1575 Indiana St.	1300 Cesar Chavez St. 1575 Indiana St.		x	x			x		x	
90 NG	Rent a Junker/Wong Property	Rent a Junker/Wong Property	1590 Indiana St.	x						x	x	
92 NG	T.C.B. Builders, Inc.	T.C.B. Builders, Inc.	801 Cesar Chavez St.		x					x		
94 NG	Imperial Drayage Co. Inc.	Imperial Drayage Co. Inc.	715 Cesar Chavez St.		x					x	x	
105 NG	Habenicht & Howlett	Habenicht & Howlett	888 Marin St.		x	x				x	x	
105 NG	Reynolds Metal Company/ Reynolds Aluminum Supply Co./ Bay Area Metals	Reynolds Metal Company/ Reynolds Aluminum Supply Co./ Bay Area Metals	3201 Third St.		x	x				x	x	
106 NG	Loomis Armour Forge	Loomis Armour Forge	1060 Marin St.		x					x		
107 NG	Economic Opportunity Council	Economic Opportunity Council	1380 Marin St.							x	x	
107 NG	San Francisco Muni Marin Div/ Marin Street Facility	San Francisco Muni Marin Div/ Marin Street Facility	1399 Marin St.	x				x		x	x	
109 NG	TGC Truck Repair/Commercial Property	TGC Truck Repair/Commercial Property	3240 Third St.		x					x	x	x
112 NG	Lucky Tours	Lucky Tours	355 Selby St.							x		
118 NG	Armbry/ Armbry Corp.	Armbry/ Armbry Corp.	390 Selby St.		x	x				x		
121 NG	East Impax Inc.	East Impax Inc.	500 Selby St.							x		

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST	CLEANERS	DRY TRS	EMIS- SIONS	HAZNET FINDS	Other Site Nos.
126 NG	San Francisco Port Authority/ San Francisco Sand Yard	3301 Third St.				x	x					x	
126 NG	SFFD Station #25	3305 Third St.				x	x					x	
128 NG	ABC Auto Parts	2 Rankin St.				x	x					x	
132 NG	ABC Auto Parts	1650 Davidson Ave.				x	x					x	
132 NG	American Diesel	1620 Davidson Ave.				x	x					x	
136 NG	Super Sightseeing Tours/ The Lowrie Paving Company, Inc.	50 Quint St.				x						x	
137 NG	City and County of San Francisco	602 Arthur Ave.				x						x	
146 NG	Pan Glo Services Incorporated	1350 Custer Ave.				x						x	
147 NG	Cleveland Auto Wrecking	171 Quint St.				x						x	
147 NG	Lithographic Consultants	135 Quint St.				x						x	
147 NG	Reiss-Craft Press	111 Quint St.				x						x	
149 NG	American Computer Graphics, Inc./ Cardelli Graphics Inc./ B & J Sewing	3450 Third St.				x						x	
149 NG	Former Gas Station/ India Basin Car Wash	3433 Third St.				x						x	
153 NG	Union Pacific Railroad	1891 Evans Ave.				x						x	
156 NG	Magic Brush, Inc./ America's Best Coffee Roasting	1500 Davidson Ave.				x						x	
161 NG	E and J Environmental Services	1461 Davidson Ave.				x						x	
161 NG	Protech Chemical Co.	1463 Davidson Ave.				x						x	
162 NG	Clircosta Iron and Metal Co., Inc.	1801 Evans Ave.				x						x	
162 NG	Mike Garza Pasqua, Inc./ Superior Analytical Laboratory/ Sharper Print Printing Co./ Pacific	1800 Evans Ave.				x						x	
165 NG	Environmental Laboratory/Madden & Nelson, Inc.	1555 Burke St.				x						x	
169 NG	MV Transportation	3550 Third St.				x						x	

EDR Site No	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID HIST UST	AST CLEANERS	DRY TRIS	EMIS SIONS	HAZNET FINDS	Other Site Nos.
170 NG	Meyer Property/ Peeters Transportation Co. Inc./ Tomra Pacific, Inc.		3600 Third St.			x	x			x		
172 NG	Buckley Door Co / SF Door/ D.C. Printing		1698 Evans Ave.			x				x		
172 NG	Union Carbide/ Linde Facility/ Altair		1690 Evans Ave.			x				x		
173 NG	Norcal Printing		1595 Fairfax St.							x		
182 NG	San Francisco Body & Paint		1630 Evans Ave.							x		
185 NG	Xtra Oil Co. (Shell)		3750 Third St.			x				x		
188 NG	Shell/ Fire Proofing System Corp.		3830 Third St.			x				x		
188 NG	Unocal/ Third Street Union 76 #2705601/ Circle K Stores, Inc.		3800 Third St.			x	x			x		
188 NG	Walgreens 2244/ On Time Cleaners/ Qualex 2244		3801 Third St.			x				x	x	x
216 NG	Cal Brake & Clutch Parts, Inc.		1698 Hudson Ave.								x	
220 NG	CCSF Purchasing Central Shops		1800 Jerrold Ave.			x	x	x		x	x	x
220 NG	DPW/BSR/Asphalt Plant		1801 Jerrold Ave.			x	x			x	x	x
224 NG	Southeast W/PCP/CCSF SE Treatment Plant		750 Phelps St.			x		x		x	x	x
224 NG	CCSF Department of Public Works		Rankin Street Pump Station			x					x	
241 NG	Southeast Water Pollution		1701 Jerrold Ave.			x				x	x	
253 NG	Union Pacific Railroad		1169 Quint St.							x		
261 NG	Chris Haney		1615 Jerrold Ave.							x		
261 NG	The Safety House		1605 Jerrold Ave.			x					x	x
Total Number of Sites in Activity Node			55	2	16	3	21	15	1	0	0	41
Oakinba 93 OK	Applied Dielectrics Inc.		1750 Cesar Chavez St.			x					x	x
93 OK	California Highway Patrol		1740 Cesar Chavez St.			x					x	x

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID HIST UST	AST	DRY CLEANERS	TRIS SIONS	EMIS- FINDS	HAZNET	FINDS	Other Site Nos.
93 OK		Gitanne Painting/ Everest Waterproofing	1270 Missouri St.								x			
93 OK		Lewis Restoration	1268 Missouri St.			x					x	x		
96 OK		Anacomp, Inc./ Zytron/ Proven Alternatives, Inc. / First Image Management Company	1760 Cesar Chavez St.									x	x	93
97 OK		Federated Metals Corp./Federated F/Fed Metals SF News Agency/ San Francisco Newspaper Agency	1901 Cesar Chavez St.	x	x							x		
97 OK		Karkar-General Signal/ Grosvenor Properties	1920 Cesar Chavez St.								x	x		
98 OK		CalTrans	Cesar Chavez and Evans Sts.	x							x	x		
98 OK		Grosvenor Gibraltar Assoc.	2020 Cesar Chavez St.								x	x		
99 OK		California Printing Co./ Zimmerman Properties	2200 Cesar Chavez St.			x					x	x		
100 OK		Grosvenor Properties Warehouse	2150 Cesar Chavez St.			x					x	x		
103 OK		CCSF DPW Corp. Yard/ Muni Metro Turn Around	2323 Cesar Chavez St.			x					x	x		
104 OK		California Beverages QQ Printing/Laundry & Dry Cleaning Equipment/ Citywide Taxi	2550 Cesar Chavez St. 2121 Evans Ave.			x					x	x		
108 OK												x	x	
110 OK		San Francisco Newspaper Agency/ San Francisco Chronicle	2000 Marin St.								x	x		
114 OK		O'Neill, Inc./ Karkar Karkar Electronics/ Shurgrid Storage Centers, Inc.	2090 Evans Ave.								x	x		
115 OK		Grosjean/ Callaghan Investment	1875 Marin St.									x		

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST UST	AST	CLEANERS	DRY	EMIS-SI	HAZNET FINDS	Other Site Nos.
117 OK	KBWB Warner Brothers	2500 Marin St.				x							x	
119 OK	BR Funsten & Company	2045 Evans Ave.				x							x	
123 OK	Parisian Bakeries/ San Francisco French Bread Company	1995 Evans Ave.		x	x	x				x	x	x	x	
123 OK	Sequoia Supply #075	1990 Evans Ave.				x								
124 OK	Mulholland Brothers	190 Napoleon St.		x		x						x	x	
124 OK	San Francisco Warehouse	175 Napoleon St.			x	x						x	x	
124 OK	San Francisco Wharehouse	180 Napoleon St.										x		
125 OK	Paper Rush, Inc.	2372 Jerrold Ave.				x						x		
129 OK	Carpenter Rigging	222 Napoleon St.										x	x	
130 OK	Consolidated Depue Corp./ RMR Construction	101 Toland St.		x	x							x	x	
130 OK	Hall Brothers Automotive/ Roverland Pressworks	152 Toland St.										x		
130 OK	RMR Construction/ Not Reported	111 Toland St.										x	x	
131 OK	ASE/ AJC Autobody/ EC Autobody/ Excalibur Autobody	150 Toland St.		x								x	x	141
133 OK	Bayside Automotive	250 Napoleon St.										x		
134 OK	Henry Broadcasting/ Bay Service Company	1900 Evans Ave.				x						x		
134 OK	Plug Busters	2277 Jerrold Ave.				x						x		
134 OK	Polita Hawley Forge/Hawley Forge Lot B	2348 Jerrold Ave.				x						x	x	
141 OK	Olympian Commercial Fueling/ Franco & Son Roadway Express, Inc.	2350 Jerrold Ave.				x						x	x	
141 OK	Olympian Commercial Fueling/ Franco & Son Roadway Express, Inc.	200 Toland St.		x	x	x						x	x	
143 OK	SFFD Station #9	201 Toland St.		x	x	x						x		
144 OK	Beronio Lumber Co.	2245 Jerrold Ave.		x	x	x						x		
151 OK	Growers Refrigeration	2525 Marin St.		x	x	x						x		
152 OK	Laidlaw Transit, Inc./San Francisco Bus Service	2050 Galvez Ave.		x	x	x						x	x	
		2270 Jerrold Ave.												

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST	DRY CLEANERS	TRIS	EMIS-SI	HAZNET FINDS	Other Site Nos.
155 OK	Anheuser Busch Wholesaler	2225 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
155 OK	Nancy Burns Painting and Wallpaper/ Luxor Cab	2250 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
157 OK	Patient Scaffolding Co./Green Glen Linen Inc.	1975 Galvez Ave.	x	x	x	x	x	x	x	x	x	x	x
158 OK	Marriott Industries Amtravel Int'l/Trailways Facility	290 Maple St. 290 Toland St.	x	x	x	x	x	x	x	x	x	x	x
158 OK	Franciscan Buslines Luxor Cab Co./ Haight Garage	300 Toland St. 2230 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
159 OK	America Computer Graphics, Inc./ ASE of San Francisco	2200 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	154
163 OK	Chevron Station No. 90683	101 Bayshore Blvd.	x	x	x	x	x	x	x	x	x	x	x
164 OK	Clementina Limited	2177 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
167 OK	Cervi Marble Co.	221 Bayshore Blvd.	x	x	x	x	x	x	x	x	x	x	x
168 OK	RN Field Construction, Inc.	125 Bayshore Blvd.	x	x	x	x	x	x	x	x	x	x	x
168 OK	Chevron Station # 9-1776	2101 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
171 OK	City of SF Market Corp./ San Francisco Wholesale Products/ American Poultry Co. Inc.	2095 Jerrold Ave.	x	x	x	x	x	x	x	x	x	x	x
171 OK	Auto Motion Beverages & More Bricker's Tow Service/ Charter Bricker Admiral Van Lines Bayshore Engine Rebuilders Howard Chung J Scott Co./Scott Company San Francisco Beverage Co. Bay Radiator Service Edward Sartor	185 Bayshore Blvd. 201 Bayshore Blvd. 175 Bayshore Blvd. 225 Barneveld Ave. 301 Barneveld Ave. 251 Barneveld Ave. 175 Barneveld Ave. 275 Barneveld Ave. 240 Bayshore Blvd 289 Bayshore Blvd	x	x	x	x	x	x	x	x	x	x	x

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID HIST UST	AST	DRY CLEANERS	TRIS	EMIS-SI	HAZNET FINDS	Other Site Nos.
179 OK	Fireguard	Flying Dutchman Autobody/ Edward Santor	266 Bayshore Blvd. 285 Bayshore Blvd.	x							x	x	x
179 OK	Robert Yick Company, Inc.	Robert Yick Company, Inc.	261 Bayshore Blvd.			x	x					x	x
179 OK	Santor Property	Santor Property	280 Bayshore Blvd.									x	
179 OK	Syn-Mar Cultured Marble, Inc./ Ester Faire	Syn-Mar Cultured Marble, Inc./ Ester Faire	220 Bayshore Blvd.									x	x
180 OK	Bayexpressions Litho, Inc.	Bayexpressions Litho, Inc.	678 Toland St.	x								x	
180 OK	Crest Royal Corp.	Crest Royal Corp.	656 Toland St.			x						x	
180 OK	Papercone Corporation	Papercone Corporation	672 Toland St.									x	x
180 OK	R.R. Flores Color Design	R.R. Flores Color Design	676 Toland St.									x	
181 OK	CGF Cash & Carry Consolidated	CGF Cash & Carry Consolidated	2275 McKinnon Ave.			x						x	
181 OK	Freightways/ The Lowrie Paving Company, Inc.	Freightways/ The Lowrie Paving Company, Inc.	2270 McKinnon Ave.			x	x					x	
186 OK	MJB Steel Product Company	MJB Steel Product Company	2245 McKinnon Ave.									x	
192 OK	James Chemicals	James Chemicals	1111 Selby St.									x	
193 OK	Kennedy Van & Storage	Kennedy Van & Storage	2225 McKinnon Ave.			x	x					x	
195 OK	Willig Freight Lines/U.S. Rentals/ United Rentals	Willig Freight Lines/U.S. Rentals/ United Rentals	123 Loomis St.			x	x	x				x	x
197 OK	San Francisco Unified School District	San Francisco Unified School District	801 Toland St.									x	
197 OK	San Francisco Unified School District	San Francisco Unified School District	834 Toland St.									x	
199 OK	Good Food Stuff Facility/ Langdorf Shell Service Station/ Bayshore Blvd. Shell Emerald City Autobody	Good Food Stuff Facility/ Langdorf Shell Service Station/ Bayshore Blvd. Shell Emerald City Autobody	2725 Oakdale Ave.			x	x					198	
200 OK			319 Bayshore Blvd.			x	x					x	x
204 OK			2600 Oakdale Ave.									x	x
204 OK	Petrini Property/Eagle Transfer and Storage Co./ Eagle Transfer and Storage Co.	Petrini Property/Eagle Transfer and Storage Co./ Eagle Transfer and Storage Co.	2590 Oakdale Ave.										

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST UST	AST	DRY CLEANERS	TRIS	EMIS- SIONS	HAZNET	FINDS	Other Site Nos.
205	OK	Vargas & Esquivel Construction, Inc.	850 Rankin St.										x		
207	OK	ABCO Mechanical Contractors, Inc.	475 Barneveld Ave.										x		
207	OK	Armstrong Installation Service, Inc.	350 Barneveld Ave.	x									x	x	
207	OK	Spinelli Coffee Company	495 Barneveld Ave.							x			x		
208	OK	Former Pacific Supply	355 Bayshore Blvd.							x			x		
210	OK	Ilo Cariari Sausage Co./ RMR Construction Co.	2424 Oakdale Ave.					x	x	x			x	x	
212	OK	CCSF Electricity Art Radiator Service Inc.	901 Rankin St. 410 Bayshore Blvd.									x	x		
213	OK	Dennis Auto Repair	380 Bayshore Blvd.					x				x			
213	OK	June Davis	400 Bayshore Blvd.									x			
213	OK	Vacant	366 Bayshore Blvd.									x			
219	OK	De Burgess Co./ Genevieve Dillard Trust	2198 Oakdale Ave.					x				x			
219	OK	Wilcox Frozen Foods	2200 Oakdale Ave.									x			
229	OK	Goodman's Lumber Company	445 Bayshore Blvd.					x	x			x			
229	OK	Rosano Construction Co./ Rosano & Co.	430 Bayshore Blvd					x				x			
230	OK	City Cab/ Maaco Auto Paint Body Works	2015 McKinnon Ave.					x	x			x			
230	OK	LaSalle Industrial Park	2000 McKinnon Ave.					x				x			
234	OK	Chipman Moving	2130 Oakdale Ave.					x				x			
237	OK	Meiswinkel Construction	2060 Newcomb Ave.									x			
242	OK	California Glass Co.	2098 Oakdale Ave.					x	x			x			
242	OK	Herrero Property/Herrero Brothers, Inc.	2100 Oakdale Ave.									x			
245	OK	The Copy Factory	2136 Palou Ave.									x			
249	OK	Rob Harris	550 Barneveld Ave.									x	x		
252	OK	Berkeley Farms/ San Francisco Distribution Center	2065 Oakdale Ave.					x				x	x		
253	OK	CCSF/ PUC/ Water/ City Distribution/SF Water Department	1990 Newcomb Ave					x	x			x	x		

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID HIST UST	AST	DRY CLEANERS	TRIS SIONS	EMIS- FINDS	HAZNET FINDS	Other Site Nos.
255 OK	Oceanic Marine Enterprises	85 Industrial St.			x						x	x	x
258 OK	Industrial Autobody Service Litho	145 Industrial St. 141 Industrial St. 1980 Oakdale Ave.		x							x	x	
258 OK	Bay Area Pie Company					x					x	x	
260 OK	Ellen Norrbom/ 2001 Auto Body & Paint	2001 Oakdale Ave.									x	x	x
260 OK	Rick Pellegrini/ L.D. Hillman	1995 Oakdale Ave.				x					x	x	
260 OK	S. Pellegrino & Sons, Inc.	1991 Oakdale Ave.			x						x	x	
260 OK	Scantena Property/ Scantena York Company/ Western Waterproofing, Inc.	2000 Oakdale Ave.			x						x	x	
260 OK	Seal Tuff Paint Co./Former Auto Repair/ Former Auto Cleaners	2003 Oakdale Ave.		x							x	x	
262 OK	Colour Press	2275 Revere Ave.									x		
264 OK	Safeway Steel Products	2277 Shaffer Ave.				x					x	x	
265 OK	RJ Muna Pictures/Cervetto Bldg. Maintenance Co.	225 Industrial St.			x						x	x	
265 OK	S and C Inc, DBA S and C Ford	211 Industrial St.		x							x	x	
266 OK	Blodgett Property/ Sunshine Movers	2240 Revere Ave.			x								
267 OK	Vacant Lot	2255 Shaffer Ave.			x								
268 OK	Liberty Press	1 Boutwell St.									x	x	x
269 OK	Whitey's U Rent/ Hertz Equipment Rental/ San Francisco Elevator	1940 Oakdale Ave.			x								
270 OK	Alhambra Water/ McKesson Water Products Co.	2217 Revere Ave.			x						x	x	
270 OK	Stanley's Auto Body Shop	2220 Revere Ave.									x		
271 OK	Quint St. Auto Reconstruction	1355 Quint St.		x							x	x	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST UST	AST	CLEANERS	DRY TRS	EMIS SIONS	HAZNET FINDS	Other Site Nos.
271 OK	TLC Autobody and Repair	1313 Quint St.	132	3	26	12	58	39	2	1	0	19	96	45
	Total Number of Sites in Activity Node													
South Basin	340 SB	San Francisco Housing Authority	1065 Oakdale Ave.										x	
	342 SB	City College of San Francisco/ CCSF Maintenance Facility	1960 Carroll Ave.		x							x	x	
	342 SB	City Screen and Graphics/ Commercial Warehouse/ Randolph Cohn	1955 Carroll Ave.		x							x	x	
	342 SB	Sal Balistreri	1950 Carroll Ave.		x							x	x	
	346 SB	Colorfast Printing/ Former Armanino Farms	1900 Carroll Ave.		x							x	x	
	346 SB	Giampolini & Co.	1901 Carroll Ave.		x							x	x	
	346 SB	Sirus Investment Company/ Alfred Hyman	2540 Newhall St.		x							x		
	347 SB	Jehova Witness Custom Cabinet & Counter Top	1411 Thomas Ave.									x		
	351 SB	Former Lucky Lager/General Brewing Company	1850 Donner Ave.									x		
	352 SB	Commercial SFFD Station #17	2601 Newhall St.		x							x		
	354 SB	Evergood Sausage	1469 Van Dyke Ave.									x		
	355 SB	Pacific Fan & Blower Co., Inc.	1295 Shaffer Ave.			x						x	x	
	359 SB	Dancolors, Inc.	1389 Underwood Ave.			x						x	x	
	360 SB	M & M Refrigerated Truck	1132 Quesada Ave.			x						x		
	361 SB	San Francisco Housing Authority	1833 Egbert Ave.			x						x		
	361 SB	San Francisco Housing Project	1828 Egbert Ave.			x						x		
	368 SB	City Cabinet Makers R & D Truck & AB Vick Screenprinting, Inc.	1818 Egbert Ave.			x						x	x	
	369 SB		1815 Egbert Ave.			x						x	x	
	369 SB		1351 Underwood Ave.			x						x	x	
			1135 Revere Ave.										x	
			1145 Revere Ave.										x	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST	DRY CLEANERS	EMIS SIONS	HAZNET FINDS	Other Site Nos.
370 SB	Ted Lowpensky		900 Palou Ave.								x	
371 SB	Continental Baking		1920 Ingalls St.								x	
371 SB	Die and Tool Products		1925 Ingalls St.								x	
373 SB	Shumate Enterprises/ L.J. McDermott	2111 Jennings St.		x	x	x					x	
374 SB	Covair Unlimited	1275 Thomas Ave.		x							x	
375 SB	Residence	1536 Wallace Ave.		x							x	
375 SB	Warehouse/ Super Soap Company/ Ricardo Salazar/ Melvin Martin	1526 Wallace Ave.									x	
377 SB	Anresco Micro Tracers, Inc.	1370 Van Dyke Ave.		x							x	
378 SB	UCSF Animal Care Facility	831 Palou Ave.			x	x					299	
379 SB	High Speed Productions, Inc.	1303 Underwood Ave.				x					x	
380 SB	Demarco Marino	1055 Quesada Ave /									x	
381 SB	James Chemical Co.	1176 Shaffer Ave.									x	
382 SB	Bayview Iron Works	1235 Thomas Ave.									x	
383 SB	Frisco Body Shop	1330 Van Dyke Ave.									x	
383 SB	John Gross Painting	1350 Van Dyke Ave.									x	
383 SB	R.A. Jenson Mfg. Co.	1337 Van Dyke Ave.		x	x						x	
385 SB	Uro Tec	1500 Wallace Ave.		x							x	
386 SB	Vacant/ Hazztech Systems, Inc./ The Experts/ Print West, Inc.	1555 Yosemite Ave.			x						x	
387 SB	Bayview Industrial Park	1401 Griffith Ave.			x						x	
388 SB	Bay Area Drum Company/ DHS TSCP Bay Area Drum Site	1212 Thomas Ave.		x							x	x
389 SB	Bayview Cleaners	1153 Shaffer Ave.		x							x	
390 SB	Dafco Vinding	1270 Underwood Ave.									x	
392 SB	Buchner Design Studio/ Architectural Forest Enterprise	1030 Quesada Ave.		x							x	
392 SB	Peters Painting and Waterproofing	1025 Quesada Ave.		x							x	x
393 SB	Moderne Drapery Service	2059 Ingalls St.		x							x	x
395 SB	M. Jones Trucking	1027 Revere Ave.		x							x	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LOG	RCRIS SQG	UST	CAFID	HIST UST	AST	DRY CLEANERS	EMIS- TRS SIONS	HAZNET FINDS	Other Site Nos.
396 SB	Florence Distributing Co.	1135 Shaffer Ave.			x								
398 SB	Fast Supply	1460 Wallace Ave.											x
399 SB	Interstate Marketing System	2125 Ingalls St.		x								x	x
400 SB	Arnold & Egan Mfg Company	1515 Griffith Ave.				x							
400 SB	Beverly England	1501 Griffith Ave.				x							
400 SB	Normandy Associates	1101 Shaffer				x							
400 SB	Normandy Associates/Tappenberg Sausage Co./Charlie Seafood	1450 Wallace Ave.				x							398
402 SB	Florence Distribution	1150 Thomas Ave.								x			
404 SB	Superior Furniture	1212 Underwood Ave.								x			
406 SB	Perez Auto & Truck Painting	2201 Ingalls St.								x			
406 SB	Vacant Site	2225 Ingalls St.								x			
406 SB	Kleinen Co., Inc.	1414 Wallace Ave.								x			
408 SB	Sales Mart/M. Fisher & Son	1485 Bayshore Blvd.								x			
410 SB	Kelly Roofing, Inc.									x			
412 SB	Auto Row	1460 Yosemite Ave.								x			
412 SB	Jim K. Auto Body	1425 Yosemite Ave.								x			
412 SB	Printime Corporation	1430 Yosemite Ave.								x			
413 SB	San Francisco Repair Shop/Uhaul	1443 Yosemite Ave.								x			
414 SB	City and County of San Francisco	1505 Bayshore Blvd.								x			
416 SB	Rollomatic Roofs, Inc.	1601 Griffith Ave.								x			
418 SB	Louis Rossie	1400 Yosemite Ave.								x			
418 SB	Zocalo Imports	1501 Bancroft Ave.								x			
418 SB	Al Nero	1508 Bancroft Ave.								x			
418 SB	J Henry Auto Body	2495 Jennings St.								x			
420 SB	City Debris Box Service/Mobil Debris Box Service/Cal Integrated Waste Management Board	2501 Jennings St.								x			
420 SB	Douglas Insulation Co., Inc.	1301 Yosemite Ave.								x			
420 SB	P.G. Molinari Sons Scene 2	1360 Yosemite Ave.								x			
420 SB	Lester Theriot	1365 Yosemite Ave.								x			
422 SB		1335 Yosemite Ave.								x			
422 SB		1475 Bancroft Ave.								x			

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST UST	AST	DRY CLEANERS	TRIS SIONS	EMIS- FINDS	HAZNET	Other Site Nos.
425 SB	Kin Wo Construction Company	2401 Ingalls St.										x		
427 SB	Independent Oil Company	1455 Bancroft Ave.										x		
428 SB	California State of DPR/ Former Auto Wreckers/Vacant	1055 Underwood Ave.		x										
429 SB	U Haul	1575 Bayshore Blvd.		x	x									426
431 SB	Brush & Sons Lumber Company/L & K Debris Box Service, Inc.	1313 Armstrong Ave.		x	x									
432 SB	Ranger Pipelines, Inc. Candlestick Point State Recreation	1296 Armstrong Ave. 1801 Griffith Ave.		x	x							x	x	
433 SB	Cleashy Mfg.	1414 Bancroft Ave.		x	x							x		
433 SB	Masterpiece Artist Canvas	1415 Bancroft Ave.		x	x									
433 SB	Scannell Property/D.R. Trucking/ Scannel Brothers Drayage Co.	2501 Ingalls St.		x	x							x		
435 SB	Freeco Vending Services, Inc.	1465 Carroll Ave.		x	x									
437 SB	U Haul	500 Paul Ave.		x								x	x	
439 SB	Vacant	1385 Fitzgerald Ave.		x								x	x	
439 SB	Pacific Bell	6150 Third St.		x	x							x	x	444
441 SB	Exquivel Grating & Paving	1210 Armstrong Ave.										x	x	
442 SB	C.M. Construction Pearson & Johnson Contractors	2727 Jennings St. 1475 Donner Ave.		x	x							x	x	
443 SB	Bay Area Iron Works	1440 Egbert Ave.										x	x	
445 SB	R.K. Whitman	1400 Egbert Ave.										x	x	
445 SB	Stephens Family Trust	1428 Egbert Ave.										x	x	
446 SB	Commercial	202 Paul Ave.										x	x	
446 SB	RH Macy & Company, Inc./ San Francisco Point of Presence/ The Cambay Group, Inc./ Macy's Paul Ave. Dist. Center	200 Paul Ave.		x								x	x	
447 SB	Pacific Bell	100 Paul Ave.		x								x	x	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST UST	AST	DRY CLEANERS	EMIS-SI	FINDS	HAZNET	TRIS SIONS	Other	Site Nos.
448 SB	Alta Roofing Company/ Liberty Bank		1414 Donner Ave.		x	x					x	x	x			
448 SB	Ecko/Giaco, Inc./ Vector Trans/ Bekins Moving and Storage Guevel and Schwarz Painting		1426 Donner Ave.	x							x	x	x			
448 SB	Rob Murray Company/ Industrial Chemical Co.		1415 Donner Ave.	x							x	x	x			
449 SB	Gonzalez Bucket & Drum/ Gonzalez Steel Drum Co.		2655 Ingalls St.	x	x					x	x	x	x			
450 SB	Commercial Building Circa Corporation of America		6199 Cesar Chavez St.	x						x	x	x	x			
451 SB	Mexico Discount Iron Works		1330 Fitzgerald Ave.							x						
451 SB	Volpe Construction Company		1324 Fitzgerald Ave.	x						x	x	x	x			
452 SB	Marble Maker		1314 Fitzgerald Ave.			x				x						
453 SB	Aari Marble Company		1370 Egbert Ave.							x						
454 SB	Darcy and Harry		1350 Egbert Ave.							x	x	x	x			
455 SB	Oris Sheet Metal Co.		1325 Egbert Ave.							x	x	x	x			
456 SB	O'Keefe Inc.		1300 Carroll Ave.							x						
457 SB	MEM Mechanical/Olsen Electric/ Andrew Malarkey		1347 Donner Ave.			x				x						
458 SB			1240 Fitzgerald Ave.			x				x						
458 SB			1325 Donner Ave.			x				x			x			
459 SB	Peers Painting and Waterproofing		1060 Key Ave.							x						
460 SB	Kent M. Lim & Co.		1320 Donner Ave.							x			x			
461 SB	Dewey Pest Control		1260 Egbert Ave.							x			x			
463 SB	San Francisco Housing Authority		6300 Third St.							x			x			
464 SB	Archdiocese of San Francisco		2 Cameron Way							x						
465 SB	San Francisco Housing Authority		1000 Key Ave.							x			x			
466 SB	San Francisco Unified School District		1021 Fitzgerald Ave.							x			x			
470 SB	Gary Gee Liu	Total Number of Sites in Activity Node	1035 Gilman Ave.							x			x			
			877 Ingerson Ave	122	2	33	3	36	19	2	1	0	14	86	46	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST CLEANERS	DRY TRIS	EMIS- SIONS	HAZNET FINDS	Other Site Nos.
Town Center	277 TC	Commercial/ San Francisco Housing Development	4445 Third St.								x	
	287 TC	Carpenter Printing, Inc.	1780 Oakdale Ave.	x							x	x
	292 TC	Providence Baptist Church	1601 McKinnon Ave.								x	
	296 TC	Bells Cleaners	4726 Third St.	x							x	x
	297 TC	San Francisco Unified School District	1551 Newcomb Ave.								x	x
	298 TC	Joseph Lee Recreation Center	1395 Mendell St.								x	
	324 TC	New Modesto Poultry/ Joe Marinucci	5144 Third St.								x	
	326 TC	Aln Realty	5172 Third St.								x	
	326 TC	Vacant Lot	5201 Third St.	x							x	
Total Number of Sites in Activity Node				9		0	2	0	0	0	1	0
IBIP	165 IBIP	PASQUA Inc.	1555 Burke Avenue								x	x
	165 IBIP	Superior Analytical Inc.	1555 Burke Avenue								x	x
	165 IBIP	Sharper Print Printing Co.	1555 Burke Avenue, Suite J								x	
	165 IBIP	Pacific Environmental Laboratory	1555 Burke Avenue, Suite F								x	
	165 IBIP	Madden & Nelson Inc.	1555 Burke Avenue								x	
	169 IBIP	M/V Transportation	3550 3rd Street	x							x	
	176 IBIP	Western Boiler Control	1500 Burke Avenue								x	
	176 IBIP	Frederick A Coleman	1500 Burke Avenue								x	
	178 IBIP	Rick Der Photography	50 Mendell								x	
	178 IBIP	Bay Cities Litho	50 Mendell Street #5								x	
	183 IBIP	A & B Painting, Inc.	110 Mendell Street								x	
	187 IBIP	US Postal Service	151 Mendell Street								x	
	187 IBIP	Advanced Litho Systems Incorporated	201 Mendell Street	x							x	x
	187 IBIP	Valoff & Peck Coatings, Inc.	190 Mendell								x	
	187 IBIP	F&I Machine Works	170 Mendell Street								x	
	190 IBIP	Plant Architectural Woodwork	300 Newhall Street								x	x
	191 IBIP	DHL Airways INC	330 Newhall Street								x	x
	196 IBIP	MCI Worldcom	375 Newhall Street								x	

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST	CAFID	HIST	UST	DRY CLEANERS	AST	TRIS	EMIS- SIONS	HAZNET	FINDS	Other Site Nos.
202	IBIP	Jeremiah S Pick Coffee Company	1495 Evans Avenue 3910 3rd Street										x	x	x	x
203	IBIP	Brizuela's Body Shop											x	x	x	x
217	IBIP	Denarde Construction Co.	1395 Evans Avenue			x		x								
217	IBIP	Monticelli Painting & Decorati	1395 Evans Avenue #200										x	x	x	x
217	IBIP	Dimac Direct, Inc.	1400 Evans Avenue										x	x	x	x
217	IBIP	CCFS Evans Campus	1400 Evans Avenue										x	x	x	x
217	IBIP	City College of San Francisco											x	x	x	x
217	IBIP	CCSF-Fire Fire Investigation	C C S F Evans Campus 14										x	x	x	x
217	IBIP	Scheid Industrial Supply Co.	1415 Evans Street			x		x								
222	IBIP	San Francisco Truck Repair Inc.	4049 3rd Street			x		x					x	x	x	x
222	IBIP	Marcos Lucero Auto Body Shop	4040 3rd Street			x		x					x	x	x	x
222	IBIP	Prolith Inc.	4040 3rd Street			x		x					x	x	x	x
226	IBIP	Alton Wong SR	1275 Fairfax Avenue			x		x					x	x	x	x
231	IBIP	Superior Analytical Inc.	1369 Evans Street			x		x					x	x	x	x
232	IBIP	Bonelli Enterprises	1385 Fairfax Street, Suite D			x		x					x	x	x	x
232	IBIP	Blakway Metal Works	101 Cargo Way			x		x					x	x	x	x
233	IBIP	Angotti & Reilly Staples & Pfeiffer	101 Cargo Way			x		x					x	x	x	x
239	IBIP	United States Postal Service	1601 Galvez Avenue			x		x					x	x	x	x
239	IBIP	US Postal Service VEH Maint	1295 Evans Street			x		x					x	x	x	x
239	IBIP	US Postal Service Maint Contro	1300 Evans Avenue			x		x					x	x	x	x
239	IBIP	General Mail Facility	1300 Evans Avenue			x		x					x	x	x	x
248	IBIP	Le Fiell Company	1469 Fairfax Avenue			x		x					x	x	x	x
257	IBIP	Pepsi Cola	200 Jennings Street			x		x					x	x	x	x
257	IBIP	VIP Imaging Incorporated	1 Newhall Street			x		x					x	x	x	x
257	IBIP	Broadway Mechanical	200 Jennings Street			x		x					x	x	x	x
257	IBIP	Lason, A Lason Company	1 Newhall Street			x		x					x	x	x	x
257	IBIP	VIP Litho	One Newhall Street			x		x					x	x	x	x
263	IBIP	Grant Printing	1201 Evans Avenue			x		x					x	x	x	x
276	IBIP	Pacific Bell	Evans & Middlepoint ROA			0	9	1	9	6	1	0	0	8	30	16
Total Number of Sites in Activity Node																
BIT																

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST	DRY CLEANERS	EMISSIONS	HAZNET FINDS	Other Site Nos.
216	BIT	Cal Clutch & Brake Parts Inc.	1698 Hudson Avenue		x						x	x
224	BIT	CCSF Dept of Public Works	Rankin St Pump Sta	x							x	
224	BIT	CCSF SE Treatment Plant	750 Phelps Street			x					x	
224	BIT	Southeast W/PCP	750 Phelps Street	x							x	
225	BIT	Restore It	1663 Hudson Avenue								x	
236	BIT	One Hour Martinizing	4130 3rd Street								x	
256	BIT	Friction Materials Corp	1649 Jerold Ave	x							x	
241	BIT	DPW/BWPC/SE, South Side	1701 Jerold Ave	x								
241	BIT	San Francisco South East Treat	1700 Jerold Ave			x					x	
241	BIT	CCSF-PUC Southeast W/PCP	1700 Jerold Ave								x	
250	BIT	A Super X Service	1601 Innes St								x	
256	BIT	Peninsula Oil Co.	1634 Jerold Ave	x								
261	BIT	Safety House The	1605 Jerold Ave	x							x	
261	BIT	Chris Haney	1615 Jerold Ave									
Total Number of Sites in Activity Node				13	0	3	0	2	0	0	0	7
Total Number of Sites				426	8	101	21	142	88	8	3	1
											296	156

Source: EDR, 2004

List of Abbreviations:

AST: Aboveground Petroleum Storage Tank Facilities

CA FID UST: Facility Inventory Database

DRY CLEANERS: Cleaner Facilities Database

EMISSIONS: Sites that report air emissions to the California Air Resources Board

FINDS: Facility Index System

HAZNET: Hazardous Waste Information System

HIST UST: Hazardous Substance Storage Container Database

RCRIS LQG: Resource Conservation and Recovery Act Information System, Large Quantity Generator

RCRIS SQG: Resource Conservation and Recovery Act Information System, Small Quantity Generator

EDR Site No.	Activity Node	Site Name	Address	RCRIS LQG	RCRIS SQG	UST CAFID	HIST UST	AST CLEANERS	DRY TRIS	EMIS-SI	HAZNET FINDS	Other Site Nos.
TRIS: Toxic	Chemical	Release Inventory System										

UST: Permitted Underground Storage Tank

Table C-4
Environmental Cases Identified in Redevelopment Area

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SITES	WDS	FTTS	LUST	CORTES	Other Site Nos.
Candlestick Point																	
469 CP	Waste Resources Technology, Inc./ GB Debris	895 Egbert Ave.											x	x			
474 CP	CCSF R & P Candlestick Park	Candlestick Park									x						
476 CP	3 Com Park/ 49ers Stadium and Mall Site	1 Candlestick Park	x									x					
477 CP	Clementina/Flora Crane/ Loftlw/ Leonetti	Candlestick Point								x							
Total Number of Sites in Activity Node				4	1	0	0	0	0	0	1	2	1	0	0	0	1
Health Center																	
335 HC	O'Keefe Inc.	75 Williams Ave.										x	x				
338 HC	Facility 21155-1/ Superior Wood Finishes	45 Williams Ave.										x	x				
339 HC	Walgreens No. 5487/ Commercial Construction/ AMB/ BTS	5300 Third St.										x					
348 HC	West Coast Plumbing	2230 Lane St.										x					
376 HC	7-Up Bottling Company	1590 Yosemite Ave.									x	x					
391 HC	Twigs, The/ 5700 Third St./Lorie Deb Bldg.	5700 Third St.									x						
405 HC	Coca-Cola USA	5800 Third St.									x	x					
415 HC	Devincenti Trucking Company	1598 Carroll Ave.									x	x					
430 HC	Swiss American Sausage	5990 Third St.										x					
430 HC	Allwood Door Company	6000 Third St.									x	x					
Total Number of Sites in Activity Node				10	0	0	0	0	0	0	0	0	0	0	0	7	8
Hunters Point Shoreline																	

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCCLIS	RAATS	VCP DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SWAT	FTTS WDS	SITES FTTS	LUST	CORTES	Other Site Nos.
257 HP	Pepsi Cola Broadway Mechanical/Former Marelich Mechanical/Former Marelich Property	200 Jennings St.													x	x
279 HP	McGarvey Property SF Pier 98 India Basin	India Basin Pier 98		x					x						x	x
279 HP	Hunters Point Power Plant	10000 Evans Ave.			x				x						x	x
280 HP	George Paizi Trustee/Vacant Bode Mix	966 Innes Ave.				x				x					x	x
305 HP	India Basin Boat Yard/Donco Industries Inc.	India Basin Innes Ave.				x									x	x
311 HP	Mee Corp.	895 Innes Ave.					x								x	x
316 HP	San Francisco Energy Cogeneration	Innes Ave.						x							x	x
316 HP	Total Number of Sites in Activity Node	9	1	0	1	0	0	0	1	1	1	1	0	0	4	4
Northern Gateway																
88 NG	F.J. Burns Drayage Port of San Francisco CCSF Muni Granex/ Graney Corp USA/ CCSF Muni Railway	630 Cesar Chavez St. Pier 46B								x					x	x
89 NG	Rent a Junker/Wong Property	1301 Cesar Chavez St.													x	x
90 NG	Warehouse	1590 Indiana St.													x	x
90 NG	Habenicht & Howlett Reynolds Metal Company/ Reynolds Aluminum Supply Co./ Bay Area Metals	1601 Indiana St. 888 Marin St. 3201 Third St												x	x	
105 NG	Loomis Armour Forge	1060 Marin St.													x	x
106 NG	San Francisco Muni Marin Div/ Marin Street Facility	1399 Marin St.													x	x
107 NG	TGC Truck Repair/Commercial Property	3240 Third St.													x	x
109 NG	Amby/ Armbee Corp.	390 Selby St.													x	x

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	SWFLF	WDS	CAL-SITES	FTTS	LUST	CORTES	Other Site Nos.
121 NG	East Impax Inc.	500 Selby St.	3301 Third St.												x	x	x	
126 NG	San Francisco Port Authority/ San Francisco Sand Yard	3301 Third St.													x	x	x	
126 NG	SFFD Station #26	3305 Third St.	3433 Third St.												x	x	x	
149 NG	Former Gas Station/ India Basin Car Wash																	
162 NG	Circosta Iron and Metal Co., Inc.	1801 Evans Ave.												x	x	x	x	
170 NG	Meyer Property/ Peeters Transportation Co. Inc./ Tomra Pacific, Inc.	3600 Third St.												x	x	x	x	
185 NG	Xtra Oil Co. (Shell)	3750 Third St.												x				
188 NG	Unocal/ Third Street Union 76 #2705601/ Circle K Stores, Inc.	3800 Third St.												x	x	x	x	
188 NG	Shell/ Fire Proofing System Corp.	3830 Third St.												x				
220 NG	CCSF Purchasing Central Shops	1800 Jerrold Ave.												x	x	x	x	
224 NG	Southeast WPCP/CCSF SE Treatment Plant	750 Phelps St.												x	x	x	x	
241 NG	Southeast Water Pollution	1701 Jerrold Ave.												x	x	x	x	
261 NG	The Safety House	1605 Jerrold Ave.												x	x	x	x	
Total Number of Sites in Activity Node				24	0	0	0	0	0	0	1	2	0	1	17	17	17	
Oakinba																		
93 OK	Applied Dielectronics Inc.	1750 Cesar Chavez St.								x	x			x	x	x	x	
97 OK	Federated Metals Corp./Federated Fry/Fed Metals SF News Agency/ San Francisco Newspaper Agency	1901 Cesar Chavez St.												x	x	x	x	
103 OK	CCSF DPW Corp. Yard/ Muni Metro Turn Around	2323 Cesar Chavez St.											x	x	x	x	x	
104 OK	California Beverages	2550 Cesar Chavez St.												x				

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SITES	SWFLF	WDS	FTTS	LUST	CORTES	Other Site Nos.
114 OK	O'Neill, Inc./Karkar Karkar Electronics/ Shurgard Storage Centers, Inc.		2090 Evans Ave.													x	x	
119 OK	BR Funsten & Company	Parisian Bakeries/ San Francisco French Bread Company	2045 Evans Ave.													x	x	
123 OK			1995 Evans Ave.							x								
124 OK	San Francisco Warehouse		175 Napoleon St.							x						x	x	
129 OK	Carpenter Rigging		222 Napoleon St.							x						x	x	
130 OK	Consolidated Depue Corp / RMR Construction		101 Toland St.							x						x	x	
134 OK	Henry Broadcasting/ Bay Service Company		2277 Jerrold Ave.							x						x		
134 OK	Polita Hawley Forge/Hawley Forge Lot B		2350 Jerrold Ave.							x						x	x	
135 OK	Kiem Produce		270 Napoleon St.							x						x	x	
141 OK	Olympian Commercial Fueling/ Franco & Son		200 Toland St.							x						x	x	
141 OK	Roadway Express, Inc.		201 Toland St.							x						x	x	
143 OK	SFFD Station #9		2245 Jerrold Ave.							x						x	x	
151 OK	Growers Refrigeration		2050 Galvez Ave.							x						x	x	
152 OK	Laidlaw Transit, Inc./San Francisco Bus Service		2270 Jerrold Ave.							x						x	x	
157 OK	Patent Scaffolding Co./Green Glen Linen Inc.		1975 Galvez Ave.							x						x	x	
158 OK	Marriott Industries		290 Maple St.							x						x	x	
158 OK	Amtravel Int./Trailways Facility		290 Toland St.							x						x	x	
164 OK	Chevron Station No. 90863		101 Bayshore Blvd							x						x	x	
167 OK	Clementina Limited		2177 Jerrold Ave							x						x	x	
171 OK	Chevron Station # 9-1776		2101 Jerrold Ave							x						x	x	

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	SWFLF	WDS	CAL-SITES FTTS	LUST	CORTES	Other Site Nos.
174 OK		Beverages & More J. Scott Co./Scott Company	201 Bayshore Blvd. 175 Barneveld Ave.												x	x	
175 OK		Syn-Mar Cultured Marble, Inc./ Ester Faire	220 Bayshore Blvd.												x	x	x
179 OK		Robert Yick Company, Inc.	261 Bayshore Blvd.												x	x	x
179 OK		Sartor Property	280 Bayshore Blvd.												x	x	x
181 OK		CGF Cash & Carry	2275 McKinnon Ave.												x	x	x
186 OK		MJB Steel Product Company	2245 McKinnon Ave.												x	x	x
193 OK		Kennedy Van & Storage	2225 McKinnon Ave.												x	x	
195 OK		Willig Freight Lines/U.S. Rentals/ United Rentals	123 Loomis St.												x	x	x
199 OK		Good Food Stuff Facility/ Langlof	2725 Oakdale Ave.							x					x	x	198
200 OK		Shell Service Station/ Bayshore Blvd. Shell	319 Bayshore Blvd.												x	x	x
204 OK		Petrini Property/Eagle Transfer and Storage Co./ Eagle Transfer and Storage Co.	2590 Oakdale Ave.												x	x	x
208 OK		Former Pacific Supply	355 Bayshore Blvd.												x	x	x
211 OK		Warehouse	925 Toland St.												x	x	x
213 OK		Carpet Connection	390 Bayshore Blvd.												x	x	x
219 OK		Wilcox Frozen Foods	2200 Oakdale Ave.												x	x	x
227 OK		Thompson Properties	2045 McKinnon Ave.												x	x	x
228 OK		Macbeath Hardwood Goodman's Lumber Company	2150 Oakdale Ave. 445 Bayshore Blvd.												x	x	x
229 OK		Chipman Moving	2130 Oakdale Ave.												x	x	x
234 OK		Meiswinkel Construction	2060 Newcomb Ave.												x	x	x
237 OK		Herrero Property/Herrero Brothers, Inc.	2100 Oakdale Ave.												x	x	x
252 OK		Berkeley Farms/ San Francisco Distribution Center	2065 Oakdale Ave.												x	x	x

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SITES 65	FTTS WDS	LUST FTTS	CORTESI	Other Site Nos.
355 SB		SFFD Station #17	1295 Shaffer Ave.											x	x	
359 SB		Evergood Sausage	1389 Underwood Ave.											x	x	
361 SB		San Francisco Housing Project	1815 Egbert Ave.											x	x	
371 SB		Continental Baking	1920 Ingalls St.											x	x	
375 SB		Warehouse/ Super Soap Company/ Ricardo Salazar/ Melvin Martin Residence	1526 Wallace Ave.											x	x	
375 SB		Residence	1536 Wallace Ave.											x	x	
381 SB		James Chemical Co.	1176 Shaffer Ave.											x	x	
382 SB		Bayview Iron Works	1235 Thomas Ave.											x	x	
386 SB		Vacant/ Haztech Systems, Inc./ The Experts/ Print West, Inc.	1555 Yosemite Ave.											x	x	
388 SB		Bay Area Drum Company/ DHS TSCP Bay Area Drum Site	1212 Thomas Ave.	x	x								x	x	x	
400 SB		Arnold & Egan Mfg Company	1515 Griffith Ave.											x	x	
402 SB		Florence Distribution	1150 Thomas Ave.											x	x	
406 SB		Vacant Site	2225 Ingalls St.											x	x	
408 SB		Sales Mart/ M. Fisher & Son	1485 Bayshore Blvd.							x				x	x	
416 SB		Molinari Salani	1401 Yosemite Ave.											x	x	
418 SB		Former Gas Station	2495 California St.											x	x	
420 SB		City Debris Box Service/Mobil Debris Box Service/ Cal Integrated Waste Management Board	1301 Yosemite Ave.										x			
425 SB		Kin Wo Construction Company	2401 Ingalls St.											x	x	
427 SB		Independent Oil Company	1455 Bancroft Ave.											x	x	
428 SB		California State of DPR/ Former Auto Wreckers/Vacant	1055 Underwood Ave.											x	x	
429 SB		U Haul	1575 Bayshore Blvd.										x	x	x	426
431 SB		Brush & Sons Lumber Company/L & K Debris Box Service, Inc.	1313 Armstrong Ave.										x	x	x	

EDR Site No	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SITES	SWFLF	WDS	CAL-SITES	FTTS	LUST	CORTES	Other Site Nos.	
431 SB	Buckeye Properties	1926 Armstrong Ave.	x														x	x	
433 SB	Masterpiece Artist Canvas	1415 Bancroft Ave.															x	x	
433 SB	Scannell Property/D.R. Trucking/ Scannel Brothers Drayage Co.	2501 Ingalls St.															x	x	
434 SB	Yosemite Slough IDS	Yosemite Ave.	x																
441 SB	Yosemite and Fitch Sewer	Hawes & Armstrong Sts															x	x	
445 SB	Stephens Family Trust	1428 Egbert Ave.														x	x		
445 SB	Bay Area Iron Works	1440 Egbert Ave.														x	x		
446 SB	Commercial	202 Paul Ave.														x	x		
448 SB	Alta Roofing Company/ Liberty Bank	1414 Donner Ave.														x	x		
449 SB	Rob Murray Company/ Industrial Chemical Co.	2655 Ingalls St.														x	x		
450 SB	Commercial Building	6199 Cesar Chavez St														x	x		
457 SB	O'Keefe Inc.	1240 Fitzgerald Ave.														x	x		
458 SB	MBM Mechanical/Olsen Electric/ Andrew Malarkey	1325 Donner Ave.														x	x		
Total Number of Sites in Activity Node				41	2	1	0	0	0	2	0	0	4	0	1	2	31	32	
Town Center																			
277 TC	Commercial/ San Francisco Housing Development	4445 Third St.														x			
297 TC	San Francisco Unified School District	1551 Newcomb Ave.														x			
324 TC	New Modesto Poultry/ Joe Marinucci	5144 Third St.														x			
Total Number of Sites in Activity Node				3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
IBIP																			
222 IBIP	Joseph Scheid Property	4049 3rd Street														x	x		
222 IBIP	San Francisco Truck Repair	4040 3rd Street														x	x		

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	SWFLF	CAL-SITES	FTTS	LUST	CORTESE	Other Site Nos.
232 IBIP	96	Recycle Central at Pier	Cargo Wy / Jennings Ave										x				
232 IBIP		Blakewell Metal Works	101 Cargo Way										x	x	x	x	
233 IBIP		Angotti & Reilly Inc.	1601 Galvez Street										x	x	x	x	
239 IBIP		United States Postal Service	1300 Evans Avenue		x								x	x	x	x	
257 IBIP		Marelich Mechanical (Former)	200 Jennings Street										x	x	x	x	
Total Number of Sites in Activity Node			7	0	0	1	0	0	0	0	1	0	0	6	6	6	
BIT		SF - SE North Point & Bayside	750 Phelps Street								x						
224 BIT		CCSF SE Treatment Plant	750 Phelps Street										x	x	x	x	
224 BIT		CCSF - DPW Southeast Plant	750 Phelps Street										x	x	x	x	
241 BIT		Southeast Water Pollution	1701 Jerrold Avenue										x	x	x	x	
241 BIT		Pollution	1701 Jerrold Avenue										x	x	x	x	
256 BIT		Peninsula Oil Company	1634 Jerrold Avenue										x	x	x	x	
256 BIT		Peninsula Oil Company	1634 Jerrold Avenue										x	x	x	x	
261 BIT		The Safety House	1605 Jerrold Avenue										x	x	x	x	
Total Number of Sites in Activity Node			7	0	0	0	0	0	0	0	1	0	0	5	5	3	
TOTAL NUMBER OF SITES				160	6	1	2	1	4	2	9	7	3	4	123	121	
Source: EDR, 2004																	
List of Abbreviations:																	
BEP: California Bond Expenditure Plan																	
CAL-SITES: Calsites																	
CASLIC: Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing, Region 2																	
CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System																	
CORTESE: Cortese Hazardous Waste and Substances Site List																	
DEED: List of Deed Restrictions																	
FTTS: Federal Insecticide, Fungicide and Rodenticide Act/TSCA Sites																	
LUST: Leaking Underground Storage Tank System																	
NOTIFY 65: Proposition 65 Records																	
RAATS: RCRA Administrative Action Tracking System																	

EDR Site No.	Activity Node	Site Name	Address	CA SLIC	BEP	CERCLIS	RAATS	VCP	DEED	NOTIFY 65	WMUDS/ SWAT	CAL-SITES	FTTS WDS	LUST	CORTESE	Other Site Nos.
SWIFI/LF: Solid Waste Information System																
VCP: Voluntary Cleanup Program Property																
WDS: Waste Discharge System																
WMUDS/SWAT: Waste Management Unit Database																

Table C-5							
Sites Recommended for No Further Action or Referred to Another Agency							
Site No.	Activity Node	Site Name	Address	CERCLIS NFRAP	NFA	REF	Other Site Nos.
Northern Gateway							
94	NG	Imperial Drayage Co. Inc.	715 Cesar Chavez St.	x			
Total Number of Sites in Activity Node				1	1	0	0
Oakinba							
97	OK	Federated Metals Corp./Federated Fry/Fed Metals SF News Agency/San Francisco Newspaper Agency	1901 Cesar Chavez St.	x			
97	OK	Karkar-General Signal/Grosvenor Properties	1920 Cesar Chavez St.	x			
155	OK	Nancy Burns Painting and Wallpaper/ Luxor Cab	2250 Jerrold Ave.	x			
215	OK	McKinnon	2100 McKinnon Ave.	x			
Total Number of Sites in Activity Node				4	4	0	0
South Basin							
361	SB	Rickes & Sons	1831 Egbert Ave.	x			
420	SB	City Debris Box Service/Mobil Debris Box Service/ Cal Integrated Waste Management Board	1301 Yosemite Ave.			x	
431	SB	Buckeye Properties	1926 Armstrong Ave.	x		x	
441	SB	Yosemite and Fitch Sewer	Hawes & Armstrong Sts.	x			
Total Number of Sites in Activity Node				4	2	1	2
Town Center							
296	TC	1633 Newcomb St.	1633 Newcomb Ave.	x			
Total Number of Sites in Activity Node				1	0	1	0
IBIP							
Total Number of Sites in Activity Node				0	0	0	0
BIT							
Total Number of Sites in Activity Node				0	0	0	0
Total Number of Sites in Redevelopment Area				10	7	2	2
Source: EDR, 2004							
List of Abbreviations:							
CERCLIS NFRAP: CERCLIS sites designated for no further action							

NFA: Sites for which DTSC has made a determination that the property does not pose a problem to the environment or to public health

REF: sites that do not require direct DTSC Site Mitigation Program and have been referred to another agency

Table C-6

Reported Spills Identified in Redevelopment Area

EDR Site No.	Activity Node	Site Name	AddressStreetName	ERNS	CHMIRS	HMRIS	OtherSiteNos
Candlestick Point							
479	CP	Not Reported	NB 101 at Hospital Curve		x		
Total Number of Sites in Activity Node			1	0	1	0	
Health Center							
345	HC	1727 Wallace Ave.	1727 Wallace Ave.	x			
363	HC	1795 Bancroft, Switch 1381	1795 Bancroft Ave.	x			
394	HC	CCSF-DPH Southeast Health Center	2401 Keith St.		x		
Total Number of Sites in Activity Node			3	2	1	0	
Hunters Point Shoreline							
280	HP	Hunters Point Power Plant	1000 Evans Ave.	x	x		
316	HP	India Basin Boat Yard/Donco Industries Inc.	894 Innes Ave.	x	x		
Total Number of Sites In Activity Node			2	2	2	0	
Northern Gateway							
90	NG	Exchange Linen Service of CA/ American Linen/ 1575 Indiana St.	1575 Indiana St.	x			
116	NG	1888 Illinois St.	1888 Illinois St.	x			
126	NG	SFFD Station #25	3305 Third St.		x		
138	NG	Not Reported	1579 Custer Ave.		x		
148	NG	191 Rankin	191 Rankin St.	x			
188	NG	Unocal/ Third Street Union 76 #2705601/ Circle K Stores, Inc.	3800 Third St.		x		
189	NG	Evans and Third St.	Evans and Third Sts.	x			
Total Number of Sites in Activity Node			7	4	3	0	
Oakinba							
130	OK	RMR Construction/ Not Reported	150 Toland St.			x	141
133	OK	Bayside Automotive	1900 Evans Ave.		x		
141	OK	Roadway Express, Inc.	201 Toland St.	x	x	x	
151	OK	Growers Refrigeration	2050 Galvez Ave.	x	x		
171	OK	455 Toland	455 Toland St.	x			
181	OK	Consolidated Freightways/ The Lowrie Paving Company, Inc.	2270 McKinnon Ave.			x	
184	OK	Not Reported	Barneveld/Necomb St.		x		
Total Number of Sites in Activity Node			7	3	4	3	
South Basin							
361	SB	Dancolors, Inc.	1833 Egbert Ave.	x			367
371	SB	Continental Baking	1920 Ingalls St.		x		
383	SB	R.A. Jenson Mfg. Co.	1337 Van Dyke Ave.			x	
385	SB	Uro Tec	1500 Wallace Ave.	x			
402	SB	1125 Shaffer Ave.	1125 Shaffer Ave.	x			

EDR Site No.	Activity Node	Site Name	AddressStreetName	ERNS	CHMIRS	HMRIS	OtherSiteNos
406	SB	1370 Wallace St.	1370 Wallace Ave.	x	x		
406	SB	Not Reported	1400 Wallace Ave.		x		
412	SB	Printime Corporation	1443 Yosemite Ave.		x		
421	SB	Griffith & Underwood St.	Griffith and Underwood Sts.	x	x		
433	SB	Scannell Property/D.R. Trucking/ Scannel Brothers Drayage Co.	2501 Ingalls St.	x			
Total Number of Sites in Activity Node				10	6	5	1
Town Center							
272	TC	Not Reported	1608 Kirkwood St.		x		
284	TC	4526 Third St., Second Floor	4526 Third St.	x			
322	TC	56 Latona St.	56 Latona St.	x	x		
Total Number of Sites in Activity Node				3	2	2	0
IBIP							
187	IBIP	151 Mendell Street	151 Mendell Street	x			
239	IBIP	Not Reported	1300 Evans Street		x		
Total Number of Sites in Activity Node				2	1	1	0
BIT							
189	BIT	Evans and Third St.	Evans and Third St.	x			
272	BIT	Not Reported	1608 Kirkwood Street		x		
Total Number of Sites in Activity Node				2	1	1	0
Total Number of Sites in Redevelopment Area				37	21	20	4
Source: EDR, 2004							
List of Abbreviations:							
CHMIRS: California Hazardous Materials Incident Reporting System							
ERNS: Emergency Response Notification System							
HMRIS: Hazardous Materials Information Reporting System							

APPENDIX D

HYDROLOGY AND WATER QUALITY TABLE

Source Control BMP Selections

Table 1
Source Control BMP Measures

BMP	Advantages	Disadvantages	Location	Source
DESIGN MEASURES				
Site Design and Landscape Planning	Provides design flexibility. Contributes to groundwater recharge.		R, I, C CASQA	
Efficient Irrigation	Reduces water consumption. Provides more aesthetic green space. Reduces volume of runoff.		R, I, C CASQA	
GENERAL MEASURES				
Storm Drain System Signs	Educates the public.	Does not necessarily reduce the amount of runoff. Some people may ignore the signs. Should be coupled with other BMPs (drain inserts) for cases when dirty water enters the storm drain.	R, I, C CASQA	
Education Programs	Contributes to community awareness to reduce stormwater pollution.		R, I, C Vic. EPA	
Drain Cleaning/Maintenance	Reduces potential for stormwater to be contaminated by entraining resuspended constituents. Removes accumulated pollutants from drainage system.	Reduces potential for stormwater to be contaminated by minimizing inclusion of trash in stormwater.	R, I, C Vic. EPA	
Efficient Trash and Recycling Collection	Reduces potential for spills reaching storm drains or waterways by containing/removing waste.	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Provides neighborhood "housekeeping".	R Vic. EPA	National BMP Database
Street Sweeping		Not complete solution because it is not feasible to constantly sweep the streets for debris.	R, I, C	

Source Control BMP Selections

Table 1 (Continued)
Source Control BMP Measures

BMP	Advantages	Disadvantages	Location	Source
MATERIAL SELECTION MEASURES				
Pervious Pavements	Doesn't require additional land. Treats water. Recharges groundwater basin. Contributes to groundwater recharge.	Restricted to gentle sloping areas. Restricted to low speed areas. Potential impacts to groundwater. Not advisable for areas where industrial activities take place.	R, C, I limited to employee parking only	CASQA
Alternative Building Materials	Minimizes chemical leaching. Can provide irrigation water in wet months. Treats water.	May not be applicable or available for every location.	R, I, C	CASQA
Roof Runoff Controls	Can contribute to groundwater recharge.		R, I, C	Puget Sound
Rooftop Rainwater Harvesting	Reduces roof runoff. Doesn't require additional land. Treats water. Reduces roof runoff. Provides bird habitat.	May have seismic issues due to additional weight.	R, I, C	Puget Sound
AREA SPECIFIC MANAGEMENT MEASURES				
Fueling Areas	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Reduces potential for fueling spills reaching storm drains or waterways.	Reduces potential for fueling spills reaching storm drains or waterways.	I, C	CASQA
Maintenance Bays and Docks	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with trash. Reduces potential for spills reaching storm drains or waterways by diverting spills from storm drains.	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with trash.	I, C	CASQA
Trash Enclosures	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Reduces volume of stormwater by collecting wash water.	Can make it more difficult to access the trash receptacles.	R, I, C	CASQA
Vehicle Washing Areas			I, C	CASQA

Source Control BMP Selections

Table 1 (Continued)
Source Control BMP Measures

BMP	Advantages	Disadvantages	Location	Source
Outdoor Material Storage Areas	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Reduces potential for spills reaching storm drains or waterways.		I, C	CASQA
Outdoor Work Areas	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Reduces potential for spills reaching storm drains or waterways.		R, I, C	CASQA
Outdoor Processing Areas	Reduces potential for stormwater to be contaminated by minimizing stormwater contact with contaminated surfaces. Reduces potential for spills reaching storm drains or waterways.		I, C	CASQA
Park, Reserve, Median Strip Maintenance	Reduces potential for grass cuttings, leaves, and prunings to contaminate storm water		R, I, C	Vic. EPA
Parking Lot Rain Garden	Naturally treats the stormwater. Provides aesthetic quality to BMP.		R, I, C	Puget Sound

R = Residential

C = Commercial

I = Industrial

Table 2
Treatment Control BMP Measures

BMP	Product Name/ Manufacturer	General Advantages	General Disadvantages	Targeted Constituent	Removal Efficiency	Source
Infiltration						
Public Domain BMPs						
Infiltration Trench	Naturally treats stormwater. Reduces or eliminates runoff to surface water.	May not be feasible for developments with limited space. Effectiveness depends on soil type. Should not accept runoff from more than 5 acres. Restricted to gentle to zero sloped areas. Difficult to rehabilitate if clogged. Contributes to groundwater recharge.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High High High High High High High	CASQA	
Infiltration Basin	Naturally treats stormwater. Reduces or eliminates runoff to surface water.	May not be feasible for developments with limited space. Effectiveness depends on soil type. Restricted to gentle to zero sloped areas. Difficult to rehabilitate if clogged. Contributes to groundwater recharge.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High High High High High High High	CASQA	
Retention/Irrigation						
Public Domain BMPs						
	Naturally treats stormwater. Reduces fresh water consumption. Reduces or eliminates runoff to surface water.	May not be feasible for developments with limited space. Relatively expensive due to equipment and maintenance. May create vector issues. Contributes to groundwater recharge.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High High High High High High High	CASQA	
Detention and Settling						
Public Domain BMPs						
Wet Pond	Provide wildlife and wetland habitat. Aesthetically pleasing. Naturally treats stormwater.	May not be feasible for developments with limited space. May pose safety concerns when accessible to public. May create vector issues. Restricted from steep, unstable slopes. May require approval from State Division of Safety of Dams.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High Medium High High High High High	CASQA	
Constructed Wetland	Provide wildlife and wetland habitat. Naturally treats stormwater. Removes dissolved pollutants.	May not be feasible for developments with limited space. May pose safety concerns when accessible to public. May create vector issues. Restricted from steep, unstable slopes. May require approval from State Division of	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High Medium High High High High High	CASQA	

Table 2 (Continued)
Treatment Control BMP Measures

BMP	Product Name/ Manufacturer	General Advantages	General Disadvantages	Targeted Constituent	Removal Efficiency	Source
Safety of Dams.						
Extended Detention Basin	Provide wildlife habitat. Naturally treats stormwater.		May not be feasible for developments with limited space. May not be feasible for watersheds less than 5 acres due to orifice restrictions.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	Medium Low High Medium Medium Medium Medium	CASQA
Proprietary BMPs						
Welland	Stormtreat	Removes dissolved pollutants. Less standing water between storms, reducing vector issue. Can be incorporated into landscape. Provides habitat for insects and invertebrate.	Not suitable for drainage areas greater than 1 acre. May require irrigation during dry season.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	Targeted Targeted Targeted Targeted Targeted Targeted Targeted	CASQA
Biofiltration						
Public Domain BMPs	Vegetated Swale	Naturally treats stormwater.	May not be feasible for developments with limited space. Effectiveness depends on soil type. Cannot treat a large drainage area. Not practical in steep terrain. Channeling may occur. Contributes to groundwater recharge	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	Medium Low Low Medium Low Medium Medium	CASQA
Vegetated Buffer Strip (handles sheet flow)		Contributes to groundwater recharge. Naturally treats stormwater.	May not be feasible for developments with limited space. Effectiveness depends on soil type. Cannot treat a large drainage area. Does not provide attenuation for runoff from intense rain events	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High Low Medium High Low High Medium	CASQA
Bioretention						
stormwater treated by vegetation and collected for transportation)		Naturally treats stormwater Vegetation provides habitat and landscaping	Not recommended for areas with shallow groundwater May present vector issues May be more applicable than other biofiltration options for areas with limited space.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High Medium High High High High High	CASQA
Filtration						
Public Domain BMPs	Media Filter	Naturally treats stormwater Vegetation provides habitat and landscaping	Generally requires 4 feet hydraulic head to operate properly High solids content will cause filter to clog, Work best for small, impervious watersheds. Can create vector issue.	Sediment Nutrients Trash Metals Bacteria Oil & Grease	High Low High High Medium High	CASQA

Table 2 (Continued)
Treatment Control BMP Measures

BMP	Product Name/ Manufacturer	General Advantages	General Disadvantages	Targeted Constituent	Removal Efficiency	Source
Proprietary BMPs						
Media Filter		Requires less space than standard flatbed filters. Minimizes vector breeding. Can remove dissolved pollutants. Different media can be selected to screen certain constituents.	May not perform the level of removal of a conventional media filter. Clogging may occur in areas of loose soil.	Organics	High	CASQA
StormFilter/Stormwater Management	AquaFilter/AquaShield			Sediment	Low	Sacramento
AquaLogic/AquaLogic, Inc.				Nutrients	Low	CASQA
				Trash	Medium	CASQA
				Metals	Low	CASQA
				Bacteria	Low	CASQA
				Oil & Grease	Medium	CASQA
				Organics	Low	CASQA
<hr/>						
Flow Through Separation						
Public Domain BMPs						
Water Quality Inlet (oil/water separator)		Provides some treatment of stormwater. Can provide spill control.	Units have limited hydraulic capacity and may not be applicable for large stormwater flows. Standing water can cause vector issue.	Sediment	Low	CASQA
				Nutrients	Low	Sacramento
				Trash	Medium	CASQA
				Metals	Low	CASQA
				Bacteria	Low	CASQA
				Oil & Grease	Medium	CASQA
				Organics	Low	CASQA
Proprietary BMPs						
Wet Vault	Jensen Interceptor & StormVault/Jensen Precast	Design features may increase performance over traditional wet vaults.	Standing water may cause vector issue. A limited drainage area can be treated. Does not remove dissolved pollutants.	Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	Targeted Targeted Targeted Targeted Not Targeted Targeted Targeted	CASQA Sacramento
Teichert Interceptor/Teichert Precast		Square configuration.				Sacramento
BaySaver/BaySaver, Inc.		Round configuration.				Sacramento
Stormception/CSR Hydro Conduit		Round configuration.				Sacramento
Vortex/Swirl Separator		Requires less space than most public domain BMPs. Minimal concern about vector breeding.	Some vector breeding may occur. A limited drainage area can be treated. May not be as effective as wet vaults at removing fine sediment. Does not remove dissolved pollutants.	Sediment Nutrients Trash Metals Bacteria Oil & Grease	Medium Low Targeted Low Not Targeted Targeted	CASQA Sacramento

Table 2 (Continued)
Treatment Control BMP Measures

BMP	Product Name/ Manufacturer	General Advantages	General Disadvantages	Targeted Constituent Organics	Removal Efficiency	Source
				Targeted Organics	Targeted	
Downstream Defender/H.I.L. Technology, Inc.	Round configuration.					Sacramento
Vortexechs/Vortexechnics V2B/I/Kistner Concrete	Square configuration.					Sacramento
Aqua-Swirl/AquaShield	Two, consecutive manholes					Sacramento
Drain Insets	No additional space requirements. Easily accessible for maintenance. No concern for vector breeding.	Not suitable for large drainage areas. Not suitable for areas with large amounts of trash or sediments that can clog the filter.		Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	Targeted Targeted Targeted Targeted Targeted Targeted	CASQA CASQA
Envirodrain/Envirodrain Fossil Filter/KrisStar Enterprises						Sacramento Sacramento
HydroKleen/Weaver Manufacturing, LLC						Sacramento
Ultra-Urban Filter/Ablech Industries						Sacramento
Aqua-Guard/AquaShield						Aqua-Shield Website
Deflection Screen	CDS/CDS Technologies	Similar to vortex separators but does not include the vortex separation stage.				Sacramento
Other						
Public Domain BMPs						
Multiple Systems	Can combine different BMPs to treat all constituents of concern. BMPs can be combined to handle high loads of various constituents. BMPs in series provide redundancy.	Can be very costly. May require a lot of space.		Sediment Nutrients Trash Metals Bacteria Oil & Grease Organics	High High High High High High High	CASQA
Proprietary BMPs						
Multiple Systems	StormTreat/Storm Treat Systems, Inc.					Sacramento

APPENDIX E

BIOLOGICAL RESOURCES TABLES

Species Name	Status ⁽¹⁾				Habitat Present	Habitat Observed	Potential Project Affect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾			
PLANTS							
Franciscan Manzanita <i>Arctostaphylos hookeri</i> ssp <i>franciscana</i>	Special Concern	None	None	1A	Extinct in California, now only occurs in cultivation.	No	No
Presidio Manzanita <i>Arctostaphylos hookeri</i> ssp <i>ravenii</i>	Endangered	Endangered	None	1B	Coastal scrub and prairie and chaparral. Only one known occurrence in SF Presidio.	No	No
San Bruno Mountain Manzanita <i>Arctostaphylos intricata</i>	Special Concern	Endangered	None	1B	Sandstone outcrops in chaparral habitats of San Bruno Mtn.	No	No
Montara Manzanita <i>Arctostaphylos montaraensis</i>	Special Concern	None	None	1B	Chaparral and coastal scrub of San Mateo County.	No	No
Marsh Sandwort <i>Arenaria paludicola</i>	Endangered	Endangered	None	1B	Freshwater marshes and swamps with dense vegetation	No	No
Alkali Milk-vetch <i>Astragalus tener</i> var <i>tener</i>	None	None		1B	Alkali flats in annual grasslands, playas, or vernal pools. Known from a single collection in 1880.	No	No
San Francisco Bay Spineflower <i>Chorizanthe cuspidata</i> var <i>cuspidata</i>	Special Concern	None	None	1B	Found on sandy slopes and terraces of coastal scrub, dune, and prairie habitats.	No	No

Species Name	Federal Status	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat	Habitat Present	Observed	Potential Project Affect
Robust Spineflower <i>Chorizanthe robusta</i> var <i>robusta</i>	Endangered	None	None	Sandy terraces, bluffs, and loose sand of coastal dunes, coastal scrub and foothill woodlands.	No	No	None
Compact Cobwebby Thistle <i>Cirsium occidentale</i> var <i>compactum</i>	Special Concern	None	1B	Grows over dunes or clay in coastal chaparral, scrub, prairie or dune habitats.	No	No	None
Presidio Clarkia <i>Clarkia franciscana</i>	Special Concern	None	None	On slopes near drainages within foothill woodlands and chaparral.	No	No	None
Round-headed Chinese Houses <i>Collomia corymbosa</i>	Special Concern	None	1B	Coastal dunes and prairie, San Francisco record from Presidio in 1902.	No	No	None
Point Reyes Bird's-beak <i>Cordylanthus maritimus</i> ssp <i>palmistris</i>	(Special Concern)	None	1B	Coastal salt marsh.	No	No	None
Fragrant Fritillary <i>Fritillaria iliaca</i>	Special Concern	None	1B	Valley and foothill grasslands, typically over serpentine soils although the soil type varies.	No	No	None
Dark-eyed Gilia <i>Gilia millefoliata</i>	Special Concern	None	1B	Coastal dunes	No	No	None

Species Name	Federal	State	Status ⁽¹⁾			Habitat Present	Observed	Potential Project Affect
			CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat			
San Francisco Gumplant <i>Grindelia hirsutula</i> var <i>mariitima</i>	Special Concern	None	None	1B	Coastal bluff and scrub often over serpentine or sandy soils	No	No	None
Diablo Helianthella <i>Helianthella castanea</i>	Special Concern	None	None	1B	Chaparral and oak woodland over rocky soils	No	No	None
Short-leaved Evax <i>Hesperoxylon sparsiflora</i> var. <i>brevifolia</i>	None	None	None	2	Sandy bluffs and flats of coastal dunes and bluff scrub	No	No	None
Marin Western Flax <i>Hesperolinon congestum</i>	Threatened	Threatened	None	1B	Found on serpentine barrens, grasslands, and chaparral.	No	No	None
Kellogg's Horkelia <i>Horkelia cuneata</i> ssp <i>servicea</i>	Special Concern	None	None	1B	Old dunes and coastal sandy soils in coniferous forest, coastal scrub and chaparral.	No	No	None
Beach Layia <i>Layia carnosa</i>	Endangered	Endangered	None	1B	Sparsely vegetated coastal dunes.	No	No	None
San Francisco Lessingia <i>Lessingia germanorum</i>	Endangered	Endangered	None	1B	Open sandy soils of remnant dunes within coastal scrub.	No	No	None
Rise Linanthus <i>Linanthus rosaceus</i>	Special Concern	None	None	1B	Coastal bluff scrub	No	No	None

Species Name	Federal Status	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat	Habitat Present	Observed	Potential Project Affect
Marsh Microseris <i>Microseris paludosa</i>	Special Concern	None	1B	Closed-cone forests, cismontane woodlands, coastal scrub and valley floor grasslands	No	No	None
White-rayed Pentachaeta <i>Pentachaeta bellidiflora</i>	(Species of Local Concern)	None	1B	Valley/foothill woodlands	No	No	None
San Francisco Popcorn Flower <i>Plagiobothrys diffusus</i>	Special Concern	Endangered	None	Valley and foothill grasslands and coastal prairie with marine influence	No	No	None
Hairless Popcorn Flower <i>Plagiobothrys glaber</i>	None	None	1A	Coastal salt marshes and alkali meadows.	No	No	None
Adobe Sanicle <i>Sanicula maritima</i>	None	Rare	None	Moist clay or ultramafic soils of meadows, seeps, grassland, chaparral, and coastal prairie.	No	No	None
San Francisco Campion <i>Silene verecunda</i> ssp <i>verecunda</i>	Special Concern	None	1B	On shale or mudstone substrates within scrub, grassland, or prairie habitats	No	No	None
Santa Cruz Microseris <i>Stebbinsoseris decipiens</i>	Special Concern	None	1B	Disturbed sandstone, shale or serpentine soils within forest, chaparral, or scrub habitats.	No	No	None
California Sea-blite <i>Suaeda californica</i>	Endangered	None	1B	Coastal salt marshes	No	No	None

Species Name	Status ⁽¹⁾					Habitat Present	Observed	Potential Project Affect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat			
Coastal Triquetrella <i>Triquetrella californica</i>	None	None	IB	Moss growing on soil in coastal scrub habitats.	No	No	No	None
HABITATS								
Coastal Brackish Marsh	None	S2.1				No	No	None
Northern Coastal Salt Marsh	None	S3.2				No	No	None

Footnotes:

- [1] Endangered and threatened are a species status under the California or Federal Endangered Species Act, Federal species of concern and candidate species do not receive any statutory protection under the Federal ESA.
- [2] California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated for under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.
- [3] California Native Plant Society. Species on List 1A are believed to be extinct within California. Species on List 1B are rare or endangered in California and elsewhere in their range. List 2 species are rare, threatened, or endangered in California, but more common elsewhere.

Element Rankings:

- S2.1 Very Threatened in California
- S3.1 Very Threatened in California
- S3.2 Threatened in California

References:

- CNDDDB (California Natural Diversity Data Base), 2004. Rarefind Commercial version 3, information dated 1/5/2004. California Department of Fish and Game
- CNPS (California Native Plant Society). 2003. Inventory of Rare and Endangered Plants (online edition, v6.2). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. California Native Plant Society. Sacramento, CA. Accessed on Mar. 18, 2004 from <http://www.cnps.org/inventory>

				Status ⁽¹⁾				Potential Project Affect
Species Name	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat	Present	Observed	
INVERTEBRATES								
Tomales Isopod <i>Caccidotea tomaleensis</i>	None	None	None	N/A	Freshwater lakes and streams with still or near still water.	No	No	None
INSECTS								
Monarch Butterfly <i>Danaus plexippus</i>	None	None	None	N/A	Winter roosts in wind-protected tree groves along the coast with nearby nectar and water sources.	No	No	None
Bay Checkerspot Butterfly <i>Euphydryas editha bayensis</i>	Threatened	None	None	N/A	Restricted to native grasslands on outcrops of serpentine soil the vicinity of San Francisco Bay.	No	No	None
San Bruno Elfin Butterfly <i>Incisalia mossii bayensis</i>	Endangered	None	None	N/A	Typically on steep, north-facing slopes of coastal mountains. Found in grassy areas. Host plant is broadleaf stonecrop (<i>Sedum spathulifolium</i>)	No	No	None
Mission Blue Butterfly <i>Icaricia icarioides missionensis</i>	Endangered	None	None	N/A	Grasslands on the San Francisco peninsula. Primary host plant are lupines (<i>Lupinus</i> spp.).	No	No	None
Bumblebee scarab beetle <i>Lichnanthe urvillei</i>	Special Concern	None	None	N/A	Coastal sand dunes.	No	No	None

Species Name	Status ⁽¹⁾				Habitat Present	Habitat Observed	Potential Project Affect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾			
FISH							
River Lamprey <i>Lampetra tridentata</i>	Special Concern	None	Special Concern	N/A	Sacramento, San Joaquin and Russian rivers in areas with clean gravelly riffles. Sandy-bottomed backwaters for ammocoetes. Good water quality and relatively low temperatures.	No	No
Green Sturgeon <i>Acipenser medirostris</i>	None	None	Special Concern	N/A	Spawns over large-cobble substrates in the Sacramento River.	No	No
Delta Smelt <i>Hypomesus transpacificus</i>	Threatened	Threatened	None	N/A	Sacramento-San Joaquin Delta as salinities less than 2 PPM. Generally not found in smaller freshwater streams.	No	No
Steelhead-Central California Coast ESU <i>Oncorhynchus mykiss</i>	Threatened	None	None	N/A	Coastal streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss</i>	Threatened	None	None	N/A	Coastal streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No
Chinook Salmon-Winter Run ESU <i>Oncorhynchus tshawytscha</i>	Endangered	Endangered	None	N/A	Central Valley streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No

	Status ⁽¹⁾						Potential Project Affect
Species Name	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat	Habitat Present	Observed
Chinook Salmon-Central Valley Spring Run ESU <i>Oncorhynchus tshawytscha</i>	Threatened	Threatened	(Special Concern)	N/A	Central Valley streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No
Chinook Salmon-Central Valley Fall/Late Fall-run ESU <i>Oncorhynchus tshawytscha</i>	Special Concern	None	(Special Concern)	N/A	Central Valley streams with stable water supply, clean gravels, and good quality riparian habitat.	No	No
Longfin Smelt <i>Spinachias thaleichthys</i>	(Special Concern)	None	(Special Concern)	N/A	Sacramento-San Joaquin Delta at salinities less than 2 PPM. Generally not found in smaller freshwater streams. Historically present in the southern portions of San Francisco Bay.	No	No
AMPHIBIANS AND REPTILES							
Western Pond Turtle <i>Clemmys marmorata</i>	Special Concern	None	Special Concern-Protected	N/A	Ponds, lakes, slow moving streams areas with multiple aerial and aquatic basking sites are preferred (Jennings and Hayes 1994).	No	No

Species Name	Status ⁽¹⁾				Habitat Present	Observed	Potential Project Affect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾			
California Red-legged Frog <i>Rana aurora draytonii</i>	Threatened	None	Special Concern - Protected	N/A	Pools in slow-moving streams and ponds with well-developed emergent freshwater marsh vegetation (Jennings and Hayes 1994).	No	No
San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i>	Endangered	Endangered	None	N/A	Freshwater marshes, ponds and slow moving streams in San Mateo County. Upland habitat that provides suitable estivation burrows.	No	No
BIRDS							
San Francisco (= Saltmarsh) Common Yellowthroat <i>Geothlypis trichas sinuosa</i>	(Special Concern)	None	Special Concern	N/A	Requires thick and continuous cover to the water line in saltmarsh. Taller vegetation (tules and cat-tails) for nesting.	No	No
California Black Rail <i>Laterallus jamaicensis coturniculus</i>	Special Concern	Threatened	Fully Protected	N/A	Found in tidal salt marshes where pickleweed is the primary vegetation. Also found in fresh water and brackish marshes at low elevations.	No	No

Species Name	Federal Status	CDFG ⁽²⁾	CNPS ⁽³⁾	Habitat	Habitat Present	Observed	Potential Project Affect
Double-crested Cormorant (nesting sites) <i>Phalacrocorax auritus</i>	None	None	Special Concern - Nesting Sites	N/A	Nests in trees along lake margins and on coastal cliffs.	No	None
California Clapper Rail <i>Rallus longirostris obsoletus</i>	Endangered	Endangered	Fully Protected	N/A	Saltwater and brackish marshes often crossed by tidal sloughs in the San Francisco Bay. Closely associated with pickleweed.	No	None
Bank Swallow <i>Riparia riparia</i>	Special Concern	None	None	N/A	Nests in steep river banks and in the sand dunes of Fort Funston.	No	None
Caspian Tern <i>Sterna caspia</i>	None	None	None	N/A	Nests in small colonies along coastline in freshwater and brackish marshes	No	None
MAMMALS							
Angel Island Mole <i>Scapanus latimanus insularis</i>	None	None	None	N/A	Only occurs on Angel Island in soft soils suitable for burrowing.	No	None

Footnotes:

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- [2] California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated for under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.
- [3] California Native Plant Society. Species on List 1A are believed to be extinct within California. Species on List 1B are rare or endangered in California and elsewhere in their range.

Element Rankings:

Species Name	Status ⁽¹⁾				Habitat Present	Observed	Potential Project Affect
	Federal	State	CDFG ⁽²⁾	CNPS ⁽³⁾			
S2.1 Very Threatened in California							
S3.1 Very Threatened in California							
S3.2 Threatened in California							

References:

CNDDDB (California Natural Diversity Data Base), 2004. Rarefind Commercial version 3, information dated 1/5/2004. California Department of Fish and Game

Jennings, M.R. and M.P. Hayes, 1994. Amphibian and reptile species of Special Concern in California. Final Report, Inland Fisheries Division; California Department of Fish and Game. 255 pp.

Williams, D.F., 1986. Mammal species of Special Concern in California. Administrative Report 86-1, Wildlife Management Division, California Department of Fish and Game. 112 pp.

APPENDIX F

GLOSSARY

GLOSSARY

Activity nodes- Due to the large size and the diversity of the Project Area, the Proposed Project breaks down public investment into seven community-identified economic development activity nodes; Northern Gateway, Town Center, Health Center, Oakinba, South Basin, Hunters Point Shoreline and Candlestick Point.

Affordable Housing Program- a part of the BVHP Redevelopment Plan for the production of affordable housing on infill and other opportunity sites in Bayview Hunters Point, encompassing a range of housing types, both rental and ownership, and including multi-bedroom family housing and one-bedroom dwellings.

Alquist-Priolo Earthquake Fault Zone: In 1972 the State of California began delineating special studies zones (called Earthquake Fault Zones since January 1994) around active and potentially active faults in the State. The zones are revised periodically, and extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction within the Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

Bayview Connections Project- a pedestrian and streetscape improvement project that would improve the linkages between transit, retail, neighborhood services, and cultural facilities in the center of the Bayview Hunters Point community.

Bayview Hunters Point Community Revitalization Concept Plan (Concept Plan)- a community planning document that describes the economic, social, educational, and environmental needs of the community, and proposes community objectives and policies and a community vision of future development. The PAC updated the *Concept Plan* in 2002 and plans to update it in the future.

Bayview Hunters Point (BVHP) Redevelopment Plan- a plan proposed to be adopted by the San Francisco Development Agency that contains an amendment to the proposed Hunters Point Redevelopment Plan. The amendment expands the existing Hunters Point (HP) Redevelopment Plan Area to include 1,600 acres, divided into seven activity nodes: Northern Gateway, Town Center, Health Center, Oakinba, South Basin, Hunters Point Shoreline, and Candlestick Point.

Bayview Hunters Point Redevelopment Projects and Rezoning Area- the southeast quadrant of the City and County of San Francisco, generally bounded by Cesar Chavez Street to the north, US 101 to the west, San Mateo County to the south, and the San Francisco Bay to the east.

Bayview Industrial Triangle (BIT) Redevelopment Plan- a 20 acre plan that amends the Bayview Hunters Point Redevelopment Projects and Rezoning that would revise the land use districts, allowable uses, and development controls of each plan (IBIP, BIT and BVHP

Redevelopment Projects and Rezoning) to be consistent with the rezoning work of the Planning Department and institute tax increment financing as the means to fund Agency activities and programs in the redevelopment project area.

Bayview Industrial Triangle Redevelopment Project (adopted 1980, ongoing) - 20.3 acres of mostly industrial land, covering a 5-block area west of Third Street between Fairfax and Kirkwood Avenues.

Bayview Transportation Improvement Program- a program designed to designate and enhance truck routes between industrial and commercial locations and the US 101 and I-280 freeways in the Project Area.

California Environmental Quality Act (CEQA) - A California law which sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process aids decision makers to determine whether any environmental impacts are associated with a proposed project. It requires environmental impacts associated with a proposed project to be eliminated or reduced.

Candlestick Point Recreation Master plan- establishes approximately 252 acres of shoreline recreation area extending from the north side of Yosemite Slough in the South Basin Activity Node to the county line, south of the Candlestick Point Activity Node. There are current plans for a wetlands improvement restoration project in the Yosemite Slough portion of the recreation area that, at full buildout, will include a nature center, an extension of the Bay Trail spine trail, and approximately 20 acres of wetlands restoration, including a bird nesting and refuge area.

Characteristic Earthquake: The moment magnitude (see below) of the seismic event considered representative of a particular fault segment, based on seismologic observations and statistical analysis of the probability that a larger earthquake would not be generated during a given time frame. In the Bay Area, the characteristic earthquake for the Peninsula segment of the San Andreas Fault has a moment magnitude (Mw) of 7.1; the entire Hayward fault, a Mw of 7.3; and the Rodgers Creek fault, Mw 7.1. The term “characteristic earthquake” replaces the term “maximum credible earthquake” (see below) as a more reliable descriptor of future fault activity.

Community Enhancements Program- a program to improve and enhance community character through the creation of Design Guidelines and various improvement and enhancement programs. The Design Guidelines would guide the design and appearance of new construction, particularly mixed-use transit-oriented development along Third Street.

Eastern Neighborhoods community planning process- This process includes consideration of three rezoning options for Bayview Hunters Point. Rezoning Option C was chosen for the Proposed Project.

Economic Development Program- a part of the BVHP Redevelopment plan designed to alleviate blight, directly and indirectly, and thereby stimulate private sector investment and development in the area and job and entrepreneurial opportunities for local residents

Façade Renewal Program- a program designed to maintain and enhance the historic facades along Third Street.

Framework Open Space Program- framework for the long-term maintenance, enhancement, and development of the community's open space and recreation system and would guide existing and new open spaces in the community, as well as potential open space resources at the Hunters Point Shipyard, on Port-owned land north of Cargo Way, and on State-owned lands around Yosemite Slough.

Green Streets Program- an augmentation of the Streetscape Plans to add landscaping and other street improvements to local neighborhood streets, in concert with the Model Block Program.

Horizontal Ground Acceleration: The speed at which soil or rock materials are displaced by seismic waves. It is measured as a percentage of the acceleration of gravity ($0.5\text{ g} = 50\text{ percent of }32\text{ feet per second squared}$, expressed as a horizontal force). Peak horizontal ground acceleration is the maximum acceleration expected from the characteristic earthquake predicted to affect a given area. Repeatable acceleration refers to the acceleration resulting from multiple seismic shocks. Sustained acceleration refers to the acceleration produced by continuous seismic shaking from a single, long-duration event.

Hunters Point Naval Shipyard- a 936-acre former Naval Shipyard occupying Hunters Point. This area is outside of the Project Area.

Hunters Point Redevelopment Project (adopted 1997, ongoing) -137 acres of former wartime housing has been redeveloped into 1,530 affordable and 269 market-rate residential units, with improvements to 7 schools and youth centers and 11 parks and plazas, plus new streets with landscaping.

Hunters Point (HP) Redevelopment Project Area- a 137-acre area that would be increased by the adoption of the Bayview Hunters Point Redevelopment Plan, which would add an additional 1,600 acres.

Hunters Point Shipyard Redevelopment Project (adopted 1997, ongoing) - a 936-acre former Naval Shipyard occupying Hunters Point, which contains 493 acres of dry land and 443 submerged acres, for which the developer group Lennar/BVHP is preparing development plans.

India Basin Industrial Park Redevelopment Project (adopted 1969, ongoing) - 126 acres of derelict industrial land are being revitalized with 11 industrial manufacturing projects, 5 retail projects, 10 warehouse/distribution projects, and 3 food production facilities.

In-fill- Building on an empty lot within the constraints of an already built-up city.

Maximum Credible Earthquake (MCE): The largest Richter magnitude (M) seismic event that appears to be reasonably capable of occurring under the conditions of the presently known geological framework. This term has been replaced by "characteristic earthquake," which is considered a better indicator of probable seismic activity on a given fault segment within a specific time frame.

Model Block Program- a program that the Agency would establish in addition to the Affordable Housing Program to address repair and improvement of single-family homes on a block-by-block basis in the community.

Modified Mercalli Intensity (MMI) Scale: A 12-point scale of earthquake intensity based on local effects experienced by people, structures, and earth materials. Each succeeding step on the scale describes a progressively greater amount of damage at a given point of observation. Effects range from those which are detectable only by seismicity recording instruments (I) to total destruction (XII). Most people will feel Intensity IV ground motion indoors and Intensity V outside. Intensity VII frightens most people, and Intensity IX causes alarm approaching panic. The scale was developed in 1902 by Giuseppi Mercalli for European conditions, adapted in 1931 by American seismologists Harry Wood and Frank Neumann for conditions in North America, and modified in 1958 by Dr. Charles F. Richter to accommodate modern structural design features.

Moment Magnitude (Mw): A logarithmic scale introduced by Hiroo Kanamori in 1977 that is used by modern seismologists to measure the total amount of energy released by an earthquake. For the purposes of describing this energy release (i.e., the "size" of the earthquake on a particular fault segment for which seismic-resistant construction must be designed) the moment magnitude (Mw) of the characteristic earthquake for that segment has replaced the concept of a maximum credible earthquake of a particular Richter magnitude. This has become necessary because the Richter scale "saturates" at the higher magnitudes; that is, the Richter scale has difficulty differentiating the size of earthquakes above M 7.5. To correct for this effect, the formula used for the Mw scale incorporates parameters associated with the rock types at the seismic source and the area of the fault surface involved in the earthquake. Thus, the moment magnitude is related to the length and width of the fault rupture. It reflects the amount of "work" (in the sense of classical physics) done by the earthquake. The relationship between Richter and moment magnitudes is not linear (i.e., moment magnitude is not a set percentage of Richter magnitude): the two values are derived using different formulae. The four well know earthquakes listed below exemplify this relationship.

Location	Date	Richter Magnitude	Moment Magnitude
New Madrid MO	1812	8.7	8.1
San Francisco CA	1906	8.3	7.7

Anchorage AK	1964	8.4	9.2
Northridge CA	1994	6.4	6.7

Although some of the values shown on the Mw scale appear lower than those of the traditional Richter magnitudes, they convey more precise (and more useable) information to geologic and structural engineers.

Project Area Committee (PAC) - a community-based committee formed to work with the Agency in planning the redevelopment of the area designated in the Amended Preliminary Plan for Bayview Hunters Point. The Bayview Hunters Point PAC includes area homeowners, resident tenants, businesses, and community organizations. The PAC also includes members representing the existing Hunters Point Redevelopment Project Area. An important outcome of the Agency's collaboration with the community through the PAC was the development of the *Concept Plan*. This committee determined that "Rezoning Option C: High Housing Option" as described in the *Workbook*, created a development potential that is most similar to the overall amount of redevelopment supported by the policies and objectives of the Proposed Project.

Rezoning Option C: High Housing Option- as described in the *Workbook*, it describes a development potential that is most similar to the overall amount of redevelopment supported by the policies and objectives of the Proposed Project. This option is considered in this document for environmental review purposes.

Richter Magnitude Scale: A logarithmic scale developed in 1935 and 1936 by Dr. Charles F. Richter and Dr. Beno Gutenberg to measure earthquake magnitude (M) by the amount of energy released, as opposed to earthquake intensity as determined by local effects on people, structures, and earth materials (for which, see Modified Mercalli Intensity Scale). Each whole number on the Richter scale represents a 10-fold increase in amplitude of the waves recorded on a seismogram and about a 32-fold increase in the amount of energy released by the earthquake. Because the Richter scale tends to saturate above approximately M 7.5, it is being replaced in modern seismologic investigations by the moment magnitude (Mw) scale (see above).

Sanborn Maps- uniform series of large-scale detailed historic maps, dating from 1867 through 1969 and depicting the commercial, industrial, and residential sections of cities. The maps were designed by surveyor D.A. Sanborn in 1866 to assist fire insurance agents in determining the degree of hazard associated with a particular property.

San Francisco Bay Plan- a plan administered by the San Francisco Bay Conservation and Development Commission (BCDC), to regulate filling, dredging, and changes in use in the San Francisco Bay and to regulate new development within 100 feet of the shoreline to ensure that maximum feasible public access to the Bay is provided.

San Francisco General Plan-a strategic and long term document comprised of elements and area plans to identify local and broad goals. The *General Plan* includes the following elements: Residence and Commerce and Industry, Recreation and Open Space, Community Facilities, Transportation, Community Safety, Environmental Protection, Urban Design and Arts.

San Francisco Redevelopment Agency- a redevelopment agency, incorporated in 1948 that was established for the purpose of improving the environment of the City and creating better urban living conditions through the removal of blight.

South Bayshore Plan- an element of the San Francisco General Plan that lays the initial foundation for much of the housing , economic development, and community enhancement programs embodied in the Proposed Project.

Special status species- any species listed as threatened, endangered, or of concern by federal, state or local resource agencies or a species that supports an important commercial industry.

Special use district (SUD) - Specific regulations that supercede the existing zoning for a particular area.

Streetscape Plans- include appropriate landscaping, street furniture, lighting, pedestrian islands, and other uniform features, and would also add parking on side streets to alleviate parking loss related to the Third Street LRT project.

Third Street light rail corridor (LRT) - a 7.1 mile light rail transit (LRT) line and maintenance facility in the heavily transit-dependent Third Street corridor in eastern San Francisco. The primary purposes of the Third Street Light Rail Project are to accommodate existing and forecasted transit ridership with greater reliability, comfort, and speed, and to facilitate economic development opportunities along the corridor. This is a MUNI proposed project and not part of the Bayview Hunters Point Redevelopment Projects and Rezoning.

Traffic Analysis Zone (TAZ) - a special area delineated by state and/or local transportation officials for tabulating traffic-related data, usually consisting of one or more census blocks, block groups, or census tracts.

Water Front Land Use Plan- a land use policy document, amended in 2001, to govern property under the jurisdiction of the Prot of San Francisco, generally from Fisherman's Wharf to India Basin.

Zoning- Regulations over use and building type that implement policies of the General Plan.

**PLACE
POSTAGE
HERE**

San Francisco Redevelopment Agency
770 Golden Gate Avenue
San Francisco, CA 94102

Attn: Jose Campos
Bayview Hunters Point Redevelopment and Rezoning Project (1996.546E)

PLEASE CUT ALONG DOTTED LINE

**RETURN REQUEST REQUIRED FOR FINAL
ENVIRONMENTAL IMPACT REPORT**

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

TO: San Francisco Redevelopment Agency

Please send me a copy of the Final EIR.

Signed: _____

Print Your Name and Address Below

A large, empty rectangular box with a thin black border, intended for the recipient to sign their name.
